DOCUMENT RESUME

ED 386 301 PS 023 523

AUTHOR	Tomlinson, Carol Ann
TITLE	How To Differentiate Instruction in Mixed-Ability Classrooms.
INSTITUTION	Association for Supervision and Curriculum Development, Alexandria, VA.
REPORT NO	ISBN-0-87120-245-X
PUB DATE	95
NOTE	90p.
AVAILABLE FROM	Association for Supervision and Curriculum Development, 1250 North Pitt Street, Alexandria, VA 22314 (ASCD Stock No. 1-95184).
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Books (010)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Ability Grouping; *Academic Ability; *Classroom Environment; *Classroom Techniques; Cognitive Style; Educational Principles; *Educational Strategies; Elementary School Curriculum; Elementary Secondary Education; Learning Activities; Learning Strategies; Program Descriptions; Secondary School Curriculum; Student Evaluation; Student Needs; *Teacher Role; Teacher Student Relationship; Teaching Methods

ABSTRACT

Noting that teachers in mixed-ability classrooms face multiple challenges, this booklet provides teachers guidance in creating learning environments that address the diversity in learning styles typical of mixed-ability classrooms. The booklet discusses what differentiated instruction is, why it is appropriate for all learners, how to plan for and manage differentiated instruction, how to help parents and students prepare for differentiated classrooms, and how to assess student progress. Chapter 1 defines differentiated instruction as providing students with multiple options for taking in information, understanding ideas, and expressing what they learn. A differentiated classroom provides multiple approaches and is proactive, qualitative, student centered, organic, and a mix of whole-class, group, and individual instruction. Chapter 2 sets out the rationale for differentiated instruction and the necessity of differentiating learning experiences and understanding the needs of both advanced and struggling learners. Chapter 3 focuses on the new roles of the teacher in the differentiated classroom. Chapter 4 describes four differentiated classrooms. Chapter 5 suggests 10 strategies for managing a differentiated classroom, while chapter 6 offers ideas for preparing students and parents for a differentiated classroom. Chapter 7 presents concepts for planning differentiated lessons. Chapters 8 through 10 discuss the curricular elements of content, process, and product. Chapter 11 presents four approaches for student assessment. An appendix provides a table of instructional and management strategies. Also included are a categorized list for further reading and a list of resources. Contains 16 references. (TM)

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How to Differentiate Instruction in Mixed-Ability Classrooms

Carol Ann Tomlinson

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How to Differentiate Instruction in Mixed-Ability Classrooms

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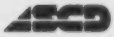

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Printed in the United States of America.

Ronald Brandt, *Director of Publications*
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ASCD Stock Number: 1-95184

Library of Congress Cataloging-in-Publication Data

Tomlinson, Carol A.
How to differentiate instruction in mixed-ability classrooms /
Carol Ann Tomlinson.
p. cm.
"ASCD stock no. 1-95184."—t.p. verso.
Includes bibliographical references.
ISBN 0-87120-245-X
1. Mixed ability grouping in education—United States.
2. Learning ability. 3. Classroom management—United States.
I. Title.
LB3061.3.T65 1995
371.2'52'0973—dc20 95-4417
CIP

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Introduction

THE STUDENTS POPULATING U.S. CLASSROOMS TODAY ARE A DIVERSE lot. They come from differing cultures and have different learning styles. They arrive at school with differing levels of emotional and social maturity. Their interests differ greatly, both in topic and intensity. At any given time, they reflect differing levels of academic readiness in various subjects—and in various facets of a single subject. And to complicate things even further, readiness and interest can vary for a given student over time and depending on the subject matter.

Teachers in mixed-ability classrooms face multiple challenges, at every grade level. Each September, many 1st graders arrive already able to read 3rd grade books with comprehension, while their peers grapple for months with the idea of left-to-right print progression or the difference between short and long vowels. Some 3rd graders make an independent leap from multiplication to division before any explanation has been offered. Many of these same children, when they reach middle school, also make connections between themes in social studies and literature, or apply advanced mathematical tools to solving science problems before other students in their classes grasp the main idea of a chapter in the textbook. In high school, students who may have been previously identified as "slow" or "average" may surprise everyone when they're able to develop a complex and articulate defense of a position related to scientific ethics or economic strategy. And some of their classmates who had, until now, found school a "cinch" must work hard to feel comfortable with applications at a more abstract level.

In life, kids can choose from a wide variety of clothing to fit their differing sizes, styles, and preferences. We understand, without explanation, that this makes them

more comfortable and gives expression to their developing personalities. In school, modifying or differentiating instruction for students of differing readiness and interests is also more comfortable, engaging, and inviting. One-size-fits-all instruction will inevitably sag or pinch—exactly as single-size clothing would—students who differ in need, even if they *are* chronologically the same age.

Acknowledging that students learn at different speeds and that they differ widely in their ability to think abstractly or understand complex ideas is like acknowledging that students at any given age aren't all the same height: It is not a statement of worth, but of reality. To accommodate this reality, teachers can create a "user-friendly" environment, one in which they flexibly adapt pacing, approaches to learning, and channels for expressing learning in response to their students' differing needs. While the goal for each student is challenge and substantial growth, teachers must often define *challenge and growth* differently in response to students' varying interests and readiness levels.

This book provides guidance for teachers who are interested in creating learning environments that address the diversity typical of mixed-ability classrooms. The principles and strategies included here can help teachers address a variety of learning styles, interests, and readiness levels. My goal here is to help teachers determine what differentiated instruction is, why it is appropriate for all learners, how to plan for it, how to manage it, how to help parents and students prepare for differentiated classrooms, and how to assess student progress in such settings.

1
What Differentiated Instruction Is—And Isn't

KIDS OF THE SAME AGE AREN'T ALL ALIKE WHEN IT COMES TO learning, any more than they are alike in terms of size, hobbies, personality, or likes and dislikes. Children *do* have many things in common because they are human beings and because they are all children, but they also have important differences. What we share in common makes us human. How we differ makes us individuals. In a classroom with little or no differentiated instruction, only student similarities seem to take center stage. In a differentiated classroom, commonalities are acknowledged and built upon, and student differences become important elements in teaching and learning as well.

At its most basic level, differentiating instruction means "shaking up" what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn. In other words, a differentiated classroom provides different avenues to acquiring content, to processing or making sense of ideas, and to developing products.

In many classrooms, the approach to teaching and learning is more unitary than differentiated. For example, 1st graders may listen to a story and then draw a picture about what they learned. While they may choose to draw different facets of the story, they all experienced the same content, and they all had the same sense-making or processing activity. A kindergarten class may have four centers that all students visit to complete the same

activities in a week's time. Fifth graders may all listen to the same explanation about fractions and complete the same homework assignment. Middle school or high school students may sit through a lecture and a video to help them understand a topic in science or history. They will all read the same chapter, take the same notes, complete the same lab or end-of-chapter questions, and take the same quiz. Such classrooms are familiar, typical, and largely undifferentiated.

Most teachers (as well as students and parents) have clear mental images of undifferentiated classrooms. After experiencing undifferentiated instruction over many years, it is often difficult to imagine what a differentiated classroom would look and feel like. How, educators wonder, can we make the shift from "single-size instruction" to differentiated instruction so we can better meet our students' diverse needs? Answering this question first requires clearing away some misperceptions.

What Differentiated Instruction is NOT

Differentiated instruction is NOT the "Individualized Instruction" of the 1970s.

We were probably onto something important in the '70s when we experimented with what we then called individualized instruction. At least we understood that students have different learning profiles and that there is merit in meeting students where they are and helping them move on from there. One flaw in the '70s approach was that we tried doing something different for all 30-plus students in a single classroom. When each student had a different reading assignment, it didn't take long for teachers to become exhausted. A second flaw was that in order to "match" each student's precise entry level, we chopped up instruction into skill fragments, thereby making learning fragmented and largely irrelevant. While it is true that differentiated instruction offers several avenues to learning, it does not assume a separate level for each learner. It also focuses on meaningful learning or powerful ideas for all students.

Differentiated instruction is NOT chaotic.

Most teachers remember the recurrent nightmare (and periodic reality!) from their first year of teaching: losing control of student behavior. A benchmark of teacher development is the point at which the teacher has become secure and comfortable with classroom management. Fear of losing control of student behavior is a major obstacle for many teachers in establishing a flexible classroom. Teachers who differentiate instruction quickly point out that, if anything, they exert more control in their classroom, not less. Compared with teachers who offer a single approach to learning, teachers who differentiate instruction have to manage and monitor many activities simultaneously. And they still must help students in developing ground rules for behavior, give and monitor specific directions for activities, and direct the sequence of events in each learning experience. Effective differentiated classrooms include purposeful student movement and some purposeful student talking. They are not disorderly or undisciplined.

Differentiated instruction is NOT just another way to provide homogeneous grouping.

Our memories of undifferentiated classrooms probably include the bluebird, cardinal, and buzzard reading groups. Typically, a buzzard remained a buzzard, and a cardinal was forever a cardinal. Under this system, buzzards nearly always worked with buzzards on skills-focused tasks, while work done by cardinals was typically at "higher levels" of thought. In addition to being predictable, student assignments to groups was virtually always teacher-selected.

A hallmark of an effective differentiated classroom, by contrast, is the use of flexible grouping, which accommodates students who are strong in some areas and weaker in others. For example, a student may be great at interpreting literature, but not so strong in spelling, or great with map skills and not as quick at grasping patterns in history, or quick with math word problems but careless with computation. The teacher who uses flexible grouping also understands that some students may begin a new task

slowly, and then launch ahead at remarkable speed, while others will learn, but more slowly. This teacher knows that sometimes *she* needs to assign students to groups so that assignments are tailored to student need, but that in other instances, it makes more sense for *students* to form their own working groups. She sees that some students prefer or benefit from independent work, while others usually fare best with pairs or triads. In a differentiated classroom, the teacher uses many different group configurations over time, and students experience many different working groups and arrangements. "Fluid" is a good word to describe assignment of students to groups in such a heterogeneous classroom. In the older, "three groups approach" to instruction, student assignment to tasks was more fixed.

Differentiated instruction is NOT just "tailoring the same suit of clothes."

Many teachers think that they differentiate instruction when they ask some students to answer more complex questions in a discussion or to share advanced information on a topic, grade some students a little harder or easier on an assignment in response to the students' perceived ability and effort, or let students select which questions to answer or skip on a test. Certainly such modifications reflect a teacher's awareness of differences in student profiles and, to that degree, the modifications are movement in the direction of differentiation. While they are not necessarily ineffective or "bad" strategies on the teacher's part, they are a "micro-differentiation" or "tailoring," and are often just not enough. If the basic assignment itself is far too easy for an advanced learner, having a chance to answer a complex question is not an adequate challenge. If information is essential for a struggling learner, allowing him to skip a test question because he never understood the information is ineffective. If the information in the basic assignment is simply too complex for a learner until she has the chance to assimilate needed background information and skills, being "easier" on her when grading her assignment does not help her in the long run. In sum, trying to stretch a garment that is far too small or attempting to tuck and gather a garment that is far too large is likely to be less effective than getting clothes that are the right fit at a given time.

What Differentiated Instruction Is

Differentiated instruction is PROACTIVE.

In a differentiated classroom, the teacher assumes that different learners have differing needs. Therefore, the teacher proactively plans a variety of ways to "get at" and express learning. He still needs to tailor or fine-tune instruction for individual learners, but because different learning options are available based on his knowledge of varied learner needs, the chances are greater that the learning experiences will provide an appropriate fit for many learners.

Differentiated instruction is more QUALITATIVE than quantitative.

Many teachers incorrectly assume that differentiating instruction means giving some students more work to do, and others less. For example, a teacher might assign two book reports to advanced readers and only one to struggling readers. Or a struggling math student might have to do only the computation problems while advanced math students do the word problems as well. Although such approaches to differentiation may seem to have an adequate rationale, they are typically ineffective. One book report is too much for a struggling learner without additional support in the process of reading as well as interpreting the text. Or a student who could act out the substance of the book effectively might be overwhelmed by writing a three-page report. If writing one book report is "too easy" for the advanced reader, doing "twice as much" of the same thing is not only unlikely to remedy the problem, but it could also seem like punishment. A student who has already demonstrated mastery of one math skill is ready to stop practice related to that skill and begin practice in a subsequent skill. Simply adjusting the *quantity* of an assignment will generally be less effective than adjusting the *nature* of the assignment to match student needs as well.

Differentiated instruction provides MULTIPLE approaches to content, process, and product.

In all classrooms, teachers deal with at least three curricular elements: (1) content—input, what students learn; (2) process—how students go about making sense of ideas and information; and (3) product—output, how students demonstrate what they have learned. These elements are so important in differentiating instruction that they are dealt with in depth in Chapters 8, 9, and 10. By differentiating these three elements, teachers offer different approaches to *what* students learn, *how* they learn it, and how they *demonstrate what they've learned*. What these different approaches have in common, however, is that they are crafted to encourage substantial growth in all students.

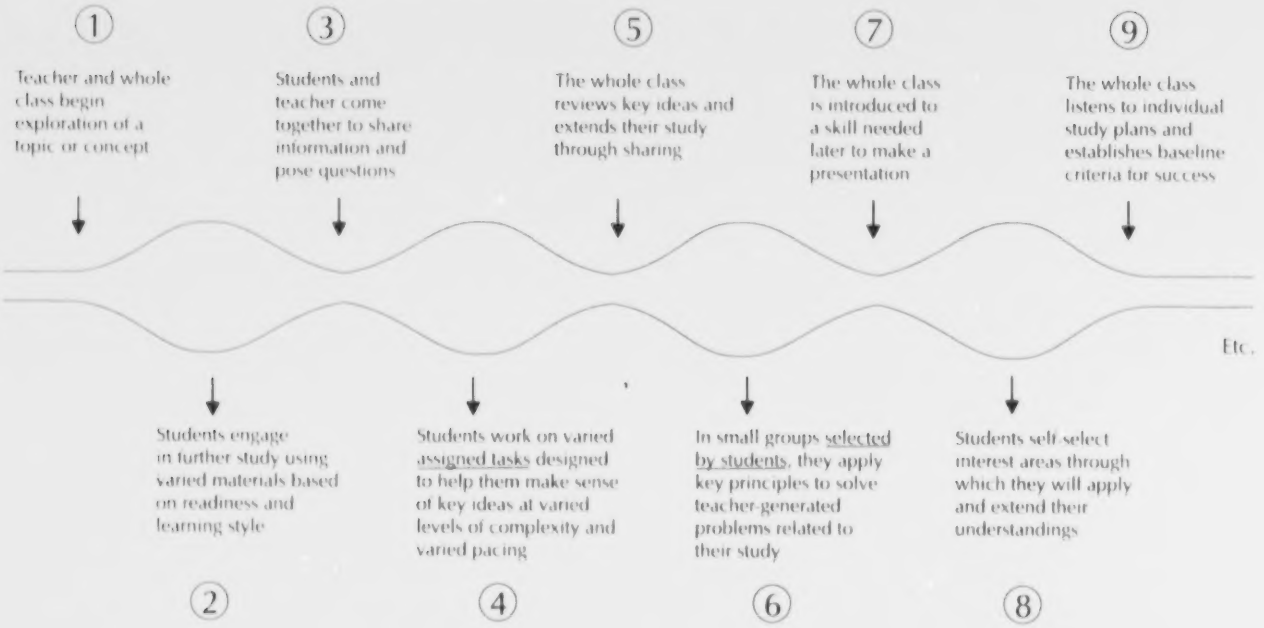
Differentiated instruction is STUDENT CENTERED.

Differentiated classrooms operate on the premise that learning experiences are most effective when they are engaging, relevant, and interesting. A corollary to that premise is that all students will not always find the same avenues to learning equally engaging, relevant, and interesting. Further, differentiated instruction acknowledges that later understandings must be built on previous understandings and that not all students possess the same understandings at the outset of a given investigation. Teachers who differentiate instruction in mixed-ability classrooms seek to provide appropriately challenging learning experiences for all their students. These teachers realize that sometimes a task that lacks challenge for some learners is frustratingly complex to others.

Differentiated instruction is A BLEND of whole-class, group, and individual instruction.

There are times in all classrooms when it is more effective or efficient to share information or use the same activity with the whole class. Such whole-group instruction establishes common understandings and a sense of community for students by sharing discussion and review. As illustrated in Figure 1.1, the pattern of instruction in a differentiated classroom could be represented by mirror

FIGURE 1.1
The Flow of Instruction in a Differentiated Classroom


1
Teacher and whole class begin exploration of a topic or concept
3
Students and teacher come together to share information and pose questions
5
The whole class reviews key ideas and extends their study through sharing
7
The whole class is introduced to a skill needed later to make a presentation
9
The whole class listens to individual study plans and establishes baseline criteria for success
Etc.
Students engage in further study using varied materials based on readiness and learning style
2
Students work on varied assigned tasks designed to help them make sense of key ideas at varied levels of complexity and varied pacing
4
In small groups selected by students, they apply key principles to solve teacher-generated problems related to their study
6
Students self-select interest areas through which they will apply and extend their understandings
8

A differentiated classroom is marked by a repeated rhythm of whole-class preparation, review, and sharing, followed by opportunity for individual or small-group exploration, sense-making, extension, and production.

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images of a wavy line, with students coming together as a whole group to begin a study, moving out to pursue learning in small groups or individually, coming back together to share and make plans for additional investigation, moving out again for more work, coming together again to share or review, and so on.

Differentiated instruction is "ORGANIC."

In a differentiated classroom, students and teachers are learners together. While teachers may know more about the subject matter at hand, they are continuously learning about how their students learn. Teachers assess students' readiness in a variety of ways and then design learning experiences based on their best understanding of students' needs and interests. Ongoing collaboration with students is necessary to refine the learning opportunities so they're effective for each student. Differentiated instruction is dynamic: Teachers monitor the match between learner and learning and make adjustments as warranted. And while teachers are aware that sometimes the learner/learning match is less than ideal, they also understand that they can continually make adjustments. Differentiated instruction often results in more effective matches than does the mode of teaching that insists that one assignment serves all learners well.

A New Image to Keep in Mind

As you continue reading about how to differentiate instruction in mixed-ability classrooms, keep this new image in mind:

> *In a differentiated classroom, the teacher plans and carries out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and learning needs.*

The practical strategies in this book should crystallize this new image for you as you work at differentiating instruction in your classroom.

2
The Rationale for Differentiated Instruction in Mixed-Ability Classrooms

SOME EDUCATORS SAY A "GOOD" EDUCATION IS ONE THAT ENSURES that all students learn certain core information and master certain basic competencies. Others define a "good" education as one that helps students maximize their capacity as learners. Because the latter definition encourages continual lifting of ceilings and testing of personal limits, it would seem to make the best sense for all learners.

Understanding and Accommodating Students' Learning Profiles

Howard Gardner (1991, 1993) believes that students—indeed, all of us—differ in at least seven distinct intelligence areas. He urges educators to be aware that students may learn more easily when they use their strongest intelligences. Learning experiences that are linguistic, logical-mathematical, or spatial will be more natural, inviting, and productive for students who are strong in those intelligences. Other students will do better with bodily-kinesthetic, musical, interpersonal, or intrapersonal learning experiences.

Other research (American Association of School Administrators [AASA] 1991; Dunn, Beaudry, and Klavas 1989; Saracho and Gerstl 1992; Shade 1989) suggests that many other natural preferences combine to create each student's individual learning profile. For example, some students learn better alone, while others learn better in a group. Movement and action engages some students best; others need plenty of time for quiet thought. Some students learn best by first focusing on abstract ideas; other students need to begin with concrete learning experiences. A given subject may come quickly to some students, more slowly to others. Some learners are more successful proceeding from specific information to forming generalizations; others need to grasp the generalizations before they can find meaning in the specifics. Some students have a need for special learning support to help them compensate for specific learning difficulties. Finally, students from varied cultural backgrounds may differ from one another in learning preferences and styles.

Mixed-ability classrooms that do not offer differentiated instruction show little understanding of these various learning profiles and imply instead that all students need to learn the same things in the same way over the same time span. Offering multiple and varied avenues to learning is likely to be more accommodating and effective for a mixed-ability classroom's wide range of student learning profiles.

Differentiating Learning Experiences

Differentiated instruction is not simply giving a "normal" assignment to most students and "different" assignments to students who are struggling or advanced. That approach usually creates a "pecking order" among students, which then tends to cause other troubles. Students assigned a remedial assignment, which looks simple to others, can take it as a message that they are inferior. Advanced assignments tend to look more interesting to nearly everyone except the advanced learner, who may perceive it as more work. These strategies can backfire, causing both advanced and struggling students to feel different from those who do the "real" assignment.

In a differentiated classroom, a number of things are going on in any given class period. Over time, all students complete assignments individually and in small groups, and whole-group instruction also occurs. Sometimes students select their group size and tasks, sometimes they are assigned. Sometimes the teacher establishes criteria for success, sometimes students do. And setting standards for success is often a collaborative process. Because there are many different things happening, no one assignment defines "normal," and no one "sticks out." The teacher thinks and plans in terms of "multiple avenues to learning" for varied needs, rather than in terms of "normal" and "different."

Understanding the Needs of Advanced Learners

Whatever label we use—"gifted learners," "high-end learners," "academically talented learners," or "advanced learners"—it seems to bother many people. In this book, "advanced learners" is used for two reasons. First, this label doesn't seem to carry some of the more controversial overtones of some other descriptors. Second, it says to the teacher in a mixed-ability classroom, "Don't worry so much about identification processes and formal labeling. Take a look at who is ahead of where you and the curriculum guide expect your students to be. Then you have a place to start."

Some students may be advanced in September and not in May—or in May, but not in September. Some may be advanced in math, but not in reading; or in lab work, but not in memorization of related scientific formulas. Some may be advanced for a short time, others throughout their lives but only in certain endeavors.

Since the primary intent of differentiated instruction is to maximize student capacity, when you can see (or you have a hunch) that a student can learn more deeply, move at a brisker pace, or make more connections than instructional blueprints might suggest, that's a good time to offer advanced learning opportunities.

But advanced learners, like other learners, often need help in developing their abilities. Without teachers and curriculums that are appropriately challenging, these learners may fail to achieve their potential. For example,

when a recent study compared Advanced Placement Exam results of the top 1 percent of U.S. students with top students in 13 other countries, U.S. students scored last in biology, 11th in chemistry, and 9th in physics (Ross 1993). There are many reasons why advanced learners don't achieve their full potential.

- **Advanced learners can become mentally lazy, even though they do well in school.** We have evidence (Clark 1992, Ornstein and Thompson 1984, Wittrock 1977) that a brain loses capacity and "tone" without vigorous use, in much the same way that a little-used muscle does. If a student produces "success" without effort, potential brainpower can be lost. In many cases, advanced learners make good grades without learning to work hard. Then when hard work is required, they become frightened, resentful, or frustrated.
- **Advanced learners may become "hooked" on the trappings of success.** They may think grades are more important than ideas, being praised is more important than taking intellectual risks, and being right is more valuable than making new discoveries. Unfortunately, many advanced learners quickly learn to do what is "safe" or what "pays," rather than what could result in greater long-term learning.
- **Advanced learners may become perfectionists.** We praise them for being the best readers, assign them to help others who can't get the math, and compliment them when they score highest on tests. When people get excited about their performance, these students often assume it's possible to keep being the best. Because they attach their self-worth so much to the rewards of schooling and because those rewards are accessible for years at a time, advanced learners often don't learn to struggle or fail. Failure then becomes something to avoid at all costs. Some advanced learners develop compulsive behaviors, from excessive worry to procrastination to eating disorders, and occasionally even suicide. Many advanced learners simply become less productive and less satisfied. Creative production typically has a high failure-to-success ratio. Students who have the capacity to be producers of new knowledge but who are afraid of failure are unlikely to see their productive capacity realized.

• **Advanced learners may fail to develop a sense of self-efficacy.** Self-esteem is fostered by being told you are important, valued, or successful. Self-efficacy, by contrast, comes from stretching yourself to achieve a goal that you first believed was beyond your reach. Although many advanced learners easily achieve a sort of hollow self-esteem, they never develop a sense of self-efficacy. These students often go through life feeling like impostors, fearfully awaiting the inevitable day the world will discover they aren't so capable after all.

Advanced learners, like all learners, need learning experiences designed to fit them. When teachers are not sensitive to that need, they may set learning goals for advanced students that are too low or that develop new skills too infrequently. Then, if students are successful anyhow, they often fail to develop the desirable balance between running into walls and scaling them. Advanced learners share other learners' need for teachers who can help them set high goals, devise plans for reaching those goals, tolerate frustrations and share joys along the way, and sight new horizons after each accomplishment.

Understanding the Needs of Struggling Learners

Labels are tricky with struggling learners, too. The term "slow learners" often carries with it a negative connotation of being shiftless or lazy, yet many struggling learners work hard and conscientiously—especially when tasks are neither boring (such as a steady diet of drill and skill) nor anxiety-producing (such as tasks that require more than they can deliver even when they work hard). The term "at-risk" overlooks the portion of the learner that may well be "at-promise." One child's struggle stems from a learning disability, another's home life takes all her energy, and another just finds a subject his nemesis.

Further, just like with an advanced learner, the learning profile of a struggling learner may shift over time, for example, suddenly becoming an eager reader after trailing the class in decoding and comprehension for some time. Many students whom we perceive to be "slow," "at-risk," or "struggling," may actually be quite proficient in talents that

schools often treat as secondary, such as leadership among neighborhood peers, storytelling, or building contraptions out of discarded materials.

Nonetheless, many students do struggle with school tasks. They are a diverse group who can challenge the artistry of the most expert teacher in listening deeply, believing unconditionally, and moving beyond a recipe or blueprint approach to teaching to shape classrooms that offer many avenues and timetables to understanding.

Here are some principles that can be helpful in ensuring that struggling learners maximize their capacity in school.

- **Look for the struggling learner's positives.** Every student does some things relatively well. It's important to find those things, to affirm them in private conversations and before peers, to design tasks that draw on those strengths, and to ensure that the student can use strengths as a means of tackling areas of difficulty. A student with kinesthetic ability and a weakness in reading, for example, may find it easier to comprehend a story by pantomiming the events in it as someone else reads aloud, and *then* reading the story to herself.
- **Don't let what's broken extinguish what works.** Few adults elect to spend the majority of their days practicing what they *can't* do. The difference between us and students is that *we* have a choice. Struggling learners are more likely to retain motivation to learn when their days allow them to concentrate on tasks that are relevant and make them feel powerful. Many learning-disabled gifted learners, for example, find school intolerable because educators spend so much time "remediating" their flaws that there's no space for enhancing their strengths. It's important to avoid this temptation with struggling learners in general.
- **Pay attention to relevance.** It's easy to understand why many struggling learners believe school is not "their place." They don't "do school" well today, and we keep insisting that persistence will pay off "someday"—often in another grade or level of school in which the child believes he has little prospect for success. Dewey (1938) reminds us that if school isn't for today, it will often turn out to be for nothing. He believed this to be true for all learners. Certainly it is so for many struggling learners. A skilled

teacher conscientiously works to make each day's explorations compelling for that day.

• **Go for foundational learning.** If struggling learners can't learn everything, make sure they learn the big ideas, key concepts, and governing principles of the subject at hand. Not only does this approach help struggling learners see the big picture of the topic and subject, but it also helps build a scaffolding of meaning, a requisite framework for future success.

• **Teach up.** Know your struggling students' learning profiles. Create tasks for struggling learners (individuals or groups with similar profiles) that are a chunk more difficult than you believe they can accomplish. Then teach for success (by encouraging, providing support, guiding planning, delineating criteria, etc.) so that the seemingly unattainable moves within the learners' reach. A strong sense of self-efficacy comes not from being told we're terrific, but rather from our own recognition that we've accomplished something we believed was beyond us.

• **Use many avenues to learning.** Some students learn best with their ears, some with their eyes, some with touch or movement. Some are solitary learners, some must interact with friends in order to learn. Some students work well by gathering details and constructing a bird's-eye view of what is being studied. Others will not learn unless the bird's-eye view is clear to them before they encounter the details. Struggling learners sometimes become more successful learners just because their way of learning is readily accessible through both teacher design and student choice.

• **See with the eyes of love.** Some kids come at the world with their dukes up. Life is a fight for them in part because the belligerance that surrounds them spawns belligerence in them. These kids are no less difficult for a teacher to embrace than for the rest of the world. But behind the tension and combativeness abundant in the world of the angry child, what's lacking is the acceptance and affection he disinvites. Perhaps a good definition of a friend is someone who loves us as we are, and envisions us as we might be. If so, these students need a teacher who is a friend. The eyes of love reflect both unconditional acceptance and unwavering vision of total potential. It's not easy, but it is critical.

A Final Thought

In the end, all learners need your energy, your heart, and your mind. They have that in common because they are young humans. *How* they need you, however, differs. Unless we understand and respond to those differences, we fail many learners.

Some of us are drawn to teach struggling learners, some are natural champions of advanced learners, and some have an affinity for the sort of "standard" student who matches our image of a 4th or 8th or 11th grader we thought we'd be teaching. That we have preferences is, again, human. The most effective teachers spend a career meticulously cultivating their appreciation for children not so easy for them to automatically embrace, while continuing to draw energy from those students who they more automatically find delightful.

3
The Role of the Teacher in a Differentiated Classroom

MIXED-ABILITY CLASSROOMS THAT OFFER DIFFERENTIATED instruction make good sense for teachers, as well as students. For many teachers, though, offering differentiated instruction first requires a paradigm shift.

The Teacher's New Role

Teachers who become comfortable with differentiated classrooms would probably say their role differs somewhat from that of a more traditional teacher. When teachers differentiate instruction, they move away from seeing themselves as keepers and dispensers of knowledge and move toward seeing themselves as *organizers of learning opportunities*. While content knowledge remains important, these teachers focus less on knowing all the answers, and focus more on "reading their students." They then create ways to learn that both capture students' attention and lead to understanding. Organizing a class for effective activity and exploration becomes the highest priority.

Teachers who differentiate instruction focus on their role as *coach* or *mentor*, and give students as much responsibility for learning as they can handle. These teachers grow in their ability to (1) assess student readiness through a variety of means, (2) "read" and interpret student clues about learning needs and preferences, (3) create a variety of ways students can gather information and ideas, (4) develop varied ways

students can explore and "own" ideas, and (5) present varied channels through which students can express and expand understandings. "Covering information" takes a back seat to making meaning out of important ideas. Most of us have not been trained to look at teaching in this light, but we are learners, too. We may not be able to transform our image of ourselves in a flash, but we can change over the course of a career.

Differentiating Instruction: Rules of Thumb

Before looking at specific ways to modify content, process, and product for students in your mixed-ability classroom, it helps to understand several general guidelines.

- **Be clear on the key concepts and generalizations or principles that give meaning and structure to the topic, chapter, unit, or lesson you are planning.** Few learners can amass and recall scores of bits of data on multiple topics, let alone organize and use all that data. All learners would probably fare better if lessons focused on key ideas and meanings. When the curriculum "covers" 500 pages, it is difficult to do much more than drag everyone through those pages in the time available. On the other hand, focusing on key concepts and generalizations can ensure that all learners gain powerful understandings that serve as building blocks for meaning and access to other knowledge. Key concepts act as springboards to help all learners make connections between the topic under consideration and expanded studies. And these learners are more likely to find their school experiences more memorable, useful, and engaging.
- **Lessons for all students should emphasize critical thinking.** In the imperfect world of teaching, you may not always accomplish this, but it should be your clear goal. In other words, it is not acceptable for remedial students to do "low-level" tasks that require only memorization of information and minimal comprehension. All tasks should require that students at least understand and be able to apply the meaning of the ideas at hand.
- **Lessons for all students should be engaging.** Again, you may not always achieve that goal, but it should still be

something to strive for as a measure of growth as an educator. Although all students will sometimes have to do drill and practice to accumulate needed data, it is not acceptable for struggling learners to spend most of their time trying to master basic information while other students get to use it. In fact, we now know (Means, Chelemer, and Knapp 1991) that many learners who struggle would find learning more natural and sensible if they were consistently presented with problems, issues, dilemmas, and unknowns that required them to use more of what they have learned.

• **In a differentiated classroom, there should be a balance between student-selected and teacher-assigned tasks and working arrangements.** This balance will vary somewhat for each student, based on the student's maturity, the nature of the task, classroom conditions, and so on. But all students should regularly have choices to make, and all students should regularly be matched with tasks compatible with their individual learner profile. Again, struggling students should not typically work alone on a teacher-assigned task while other students typically work together on tasks of their own choice.

The next chapter offers several scenarios of how teachers of different grades and subjects have used these guidelines to transform their role in the classroom.

4
A Look Inside Some Differentiated Classrooms

THERE IS NO RECIPE FOR DIFFERENTIATION. TEACHERS CONSTRUCT differentiated classrooms in varying ways depending on their own personalities, the nature of the subject and grade level they teach, and the learning profiles of their students. These teachers have at least two things in common, however: a conviction that students differ in their learning profiles, and a belief that classrooms in which students are active learners, decision makers, and problem solvers are more natural and effective than those in which students are passive recipients of information.

Although there is no formula for differentiation, taking a glimpse at some differentiated classrooms is often helpful in envisioning how differentiation can be applied. The following "tour" includes modes of differentiation appropriate for all grade levels and subjects.

Mrs. Riley and Her 3rd Graders

Mrs. Riley uses a number of differentiation strategies, but one she finds quite natural is the use of learning centers and interest centers. Based on an assumption that all learners need exposure to the same information, she used to create centers and then send each child to every center. Now, after designing a variety of centers based on her students' learning profiles, Mrs. Riley often assigns students to centers based on her formal and informal assessment of their readiness. Even when they are assigned to a learning

center, students make choices about their work in ways that address their interests and learning preferences.

Today, for example, all students will be assigned to one of two reading/writing **learning centers.** Both reading/writing centers focus on themes in biographies the students have read. At each center, students can elect to work alone, with a partner, or with a group of three or four peers assigned to their center. At one center, students select a person they've read about and make an annotated time line of the person's early life, selecting events that they think were most important in shaping the person's life. Then they choose to either write a paper that explains their choices, draw a storyboard of the events, or act out the events one day during sharing time. Whatever way a student decides to express understanding, the focus must be on identifying themes in the life of the person about whom they read. At the other, more complex reading/writing center, students select one of the biographies they've read, as well as a fictional work they've read about a young person. Then they write about some real-life events they and some of their 3rd-grade friends have experienced. Finally, after looking in all three works for common themes about growing up, they design a method of showing how those themes are used in each setting. Mrs. Riley gives them three suggestions: theme trees; a matrix; and conversations between or among the subject of the biography, the fictional character, and a 3rd grader.

Some students go early in the day to one of these two reading/writing centers; after that, they work with differentiated math assignments at their desks. Other students experience this combination of activities in reverse order.

Interest centers are also available to students during the week. Offered at the same time as the biography-focused learning centers, some interest centers allow students to explore the skills of acting, learn how to make storyboards for advertisements and animated films, or use a laser disc to find out more about a famous person they're interested in. Mrs. Riley also offers interest centers on science- and math-related topics. Students select which interest centers to attend. Most interest centers in Mrs. Riley's classroom are available for two weeks or more.

Mr. Blackstone and His 6th Graders

Mr. Blackstone teaches science and math to students on his middle school team. This week, the team is studying inertia. When introducing this unit, Mr. Blackstone first uses whole-class instruction to ensure that all students have a grasp of key ideas. Then, students learn more about inertia by working at one of two labs designed to help them understand, analyze, and apply important unit-related principles. One lab employs a more multifaceted, complex, and ambiguous problem than the other. The teacher assigns students to the lab he feels is most appropriate for them, based on general observation of the students over time, dialogue during the whole-class introduction, and "exit cards" on which students summarized what they had learned about key principles of inertia as they left the whole-class session to move on to their next class.

Following the labs, students take a test that assesses how well they've learned the key principles from their whole-class study and differentiated labs. Students who show mastery on the test can begin working on a rocketry project, either alone or with one or two other classmates who have also shown mastery. Students who do not yet show mastery begin working on a different rocketry project, one that is more structured and ensures they reencounter and apply the key principles. Mr. Blackstone works with this second group of students, guiding their thinking so they can apply important understandings. He also works periodically with the more advanced group on their project, pushing their thinking further, and avoiding the role of "the remediator."

By working with small groups much of the time, Mr. Blackstone gets to better know his students and also how they think. Because Mr. Blackstone clearly enjoys both his subject and his students, everyone in the class looks forward to opportunities to work directly with him.

Miss Jeffries and Her 8th Grade History Students

Miss Jeffries is determined to help her students understand that history is alive and well, so her students often work on investigative projects that help them explore

themes common to history over time and place. She has designed a project to help them explore what went on in their Virginia town during the Civil War. All students begin this project by reading material available in class, viewing videos, and doing some library research. During these activities, they note in their individual learning logs information they will use for background material. Next, they make individual selections of resources from a menu of references and other sources that Miss Jeffries has prepared. In individual conversations, she often adds one or two additional resources to a student's list based on her assessment of that learner's interests and reading/comprehension levels, as well as her sense of topics they might enjoy. Students also have to find at least one source of information that is not in their classroom or school library (Miss Jeffries' source list includes possibilities such as talking with teachers in the school, interviewing students who have completed the study in previous years, or going to a nearby public library or museum). As they do their in-class or library research, Miss Jeffries encourages students to share with one another in a round-robin discussion both sources and ideas they find interesting. Students also keep a running class list of topics that they might explore for their investigations, such as medical practice in their town during the Civil War, disease patterns, the economy, the architecture and buildings in the town then and now, roles of local citizens in the military, local politics during that period, and schooling or education during the Civil War. Within two to four days, students decide on a first and second choice for their investigation, which they submit to their teacher.

Miss Jeffries then assigns students to groups by their topics and strengths. Sometimes she constructs mixed-ability groups of five or six students; other times, she pairs students of relatively similar ability who have common interests and work well together. This flexible grouping strategy allows her to tailor projects for advanced students or for students who need more structure and guidance. A key principle in her class, however, is the importance of working as colleagues, so students in one group are free to call on students in any other group for advice or assistance with a specific task, such as computer

work, drawing, or editing. She also pairs students across groups every few days so they can share ideas that might benefit other students doing similar investigations. The tone is one of cooperation for mutual success, not competition for scarce rewards. Miss Jeffries negotiates with her students to determine the criteria for the content, format, and quality of final products. Some criteria apply to the class as a whole, while others are specific to a group or individual task.

Miss Jeffries designed this project very carefully: It has both clearly defined, "custom-fit" responsibilities for each student, and vague, unassigned components that each group must work out how to handle. Every student has an opportunity to make a clear, individual contribution to the whole that is personally challenging and interesting. And all students engage in tasks that help them improve their negotiating and group-work skills.

Mr. Rakes and His High School Math Students

Mr. Rakes has found that by the time students enter Algebra II, their levels of math skill are quite varied. Some students seem to grasp the principles in a chapter almost before they read it; others look squint-eyed and genuinely puzzled as their peers put homework answers on the board. Somewhere in the middle are students who grasp the ideas, but more slowly or only after repeated explanations.

When Mr. Rakes used whole-class instruction to address everyone's needs in only one way, he found that he was unsuccessful with most of his students. So he began thinking of his class differently. Now, when beginning a new chapter, he offers students a chance to "compact out" of the chapter either before the class begins working on it, or after three days of work with the entire class. "Compacting out" works like this: Prior to or early on in studying a chapter, students take the chapter post-test. Those who demonstrate competency then do an ongoing, independent investigation that explores uses of mathematics in the world. Mr. Rakes gives those students guidelines for developing the independent studies, but the students get to choose the specific exploration and design the project.

Sometimes students work alone on their investigations, and sometimes in small groups. Mr. Rakes works with them to tighten or focus plans as needed.

Students like the "compacting out" option because it gives them a chance to work with many topics that interest them, but that they seldom have a chance to examine in depth during high school—topics such as computers, astronomy, architecture, medicine, and economics. Students working on independent studies can work in class (if they don't distract others), request library time (if they use the privilege appropriately), or even do another assignment during math class to free up time for work on the independent study after school. Each student creates a time line of project tasks and is accountable for meeting deadlines and keeping a process log of project work and thought.

When the other students have completed working through the chapter, *all* students take the end-of-chapter tests. This practice assures that those who compacted out of the chapter stay fresh with the skills; it also assures Mr. Rakes that everyone understands the material. Prior to this test, Mr. Rakes often takes two days for peer review, which he does by constructing mixed-ability groups in which all students work together to complete review problems.

By the time the second semester starts, a few students who weren't advanced enough for compacting during the first semester will have progressed to the point where they can opt for compacting and the math application independent study. Sometimes, a few students who had compacted out the first semester feel more comfortable if they work along with the class during the second semester. And a few students who had compacted during the first semester will again do so during the second semester. They often design independent projects that are extensions of their earlier independent studies.

When Mr. Rakes works with the students who have not compacted out, he uses a two-part study plan. First, he uses whole-group instruction to teach key principles. Next, he creates cooperative groups so students who seem able to apply the ideas somewhat independently can practice doing so. Students who are still struggling then work directly with Mr. Rakes during the first part of each class period so that

he can assess their thinking and help them focus on missing concepts and skills. During the last portion of the class, while this group is working in pairs on application tasks, Mr. Rakes checks in with the cooperative groups that have been working without his guidance.

Mr. Rakes has found this three-part approach to his class manageable for him and productive for his students. He has also begun to encourage *all* of his students to do math application studies as a part of their individual portfolio work. Although some students' individual projects may not be as complex or time-consuming as others', the projects give all students a chance to see math in a different light and to explore their interests. Some students, for example, learn about how math is used outside the textbook and the classroom by visiting and interviewing people in their community who use math in their work.

The Teacher's Toolbox

These four teachers use a variety of instructional strategies to help them match content, process, and product to the readiness, interest, and talents of their students. Some of the strategies described were interest and learning centers, mixed-ability and matched-ability cooperative groups, working as colleagues, negotiated criteria, compacting out, independent investigations, and peer review (see the Appendix for a comprehensive and descriptive list of these and other instructional strategies that are useful for managing differentiated classrooms). The next chapter offers 10 "megastrategies" you can use to move away from one-size-fits-all instruction and toward designing instruction that challenges students individually by offering a variety of learning and working arrangements.

5
Strategies for Managing a Differentiated Classroom

FOR MANY TEACHERS, UNCERTAINTY ABOUT HOW TO MANAGE A differentiated classroom grows into a fear that stops them from attempting to provide instruction based on their students' varied interests and needs. Many teachers don't appreciate how skilled they are at attending to multiple signals and juggling a variety of roles. The same skills that help teachers succeed in the complex environment of a classroom can lead them toward success in a differentiated classroom environment, as well.

As Piaget (1969) reflected, "The heartbreaking difficulty in pedagogy, as indeed in medicine and other branches of knowledge that partake at the same time of art and science, is, in fact, that the best methods are also the most difficult ones" (p. 69). Although managing a differentiated classroom is not always easy, progress in that direction tends to make school a better fit for more students. It also tends to make teaching more satisfying and invigorating.

Managing a Differentiated Classroom: The Basics

Worthwhile endeavors are often challenging—and usually worth it. Here are 10 key strategies you can use to successfully meet the challenge of designing and managing differentiated instruction for your learners.

1. Have a strong rationale for differentiating instruction based on student readiness and interest. Then share your thinking with your students and their parents—often. Just as teachers sometimes need help creating new mental images of classrooms as places that are fluid and offer many avenues to learning, so do students and parents. If you help your students and parents understand and contribute to your new view of the classroom, they will be able to adapt. Without your help, they may feel that you are "violating the rules of the game," and then they may become confused or resistant. This communication strategy is so important that the next chapter thoroughly describes a way to prepare yourself, your students, and their parents for a student-centered, differentiated classroom.

2. Begin differentiating at a pace that is comfortable for you. Some teachers already make frequent adjustments in curriculum and instruction to allow for student differences in their classrooms. With just a few additional guidelines, these teachers are ready to move ahead quickly in differentiating instruction. Others who are less experienced or confident need to move in smaller increments. There's a strong parallel to students in a classroom here: Some leap like leopards through a given task, others move at a more measured gait. What matters most is that students—and teachers—make progress from their respective beginning points, not that they all work alike.

You may easily envision yourself working with varied learning resources, such as differing texts, multilevel supplementary materials, various computer programs, or peer tutors. You may, on the other hand, feel more comfortable using a single text with your class but allowing some students to move through it more rapidly, or differentiating activities so students gain—at their own pace—an understanding of ideas in the text. Perhaps you'd find it easiest to differentiate student products. Creating small-group tasks tailored to student readiness, interest, or talent may be more your style. Or you may want to begin by learning to use groups in your class—not varying the group tasks at first, but just gaining skill and confidence in directing groups. If you teach multiple subjects, you may

want to try your hand first in the subject you enjoy most. If you teach different groups of students each day, you might find it advantageous to begin differentiating instruction for the group you find easiest to work with. Finding your point of readiness and beginning there is as important for you as for your students. Not beginning is a guaranteed way to avoid progress. Biting off too much invites discouragement and failure. Begin where you can and chart a time line for your own progress.

3. Time differentiated activities for student success. Some students can manage group or independent work for long periods of time. Others have less capacity to sustain group or independent tasks. When designing your tasks, remember two things: (1) time allotted for a task should be a bit shorter than the attention span of the students who work on that task, and (2) advanced learners often have extended attention spans. When designing tasks for students with strong interest and ability in a particular area, allow a longer chunk of time during a class, day, or week than the amount of time planned for tasks for students whose interest or talent in the same area is not as great. A goal to strive for, over time, is helping all students sustain group and independent tasks for longer than what was initially comfortable for them. Key to reaching that goal is their sense of success in those tasks.

4. Use an "anchor activity" to free you up to focus your attention on your students. In almost every classroom, all students, from time to time, engage in activities like reading, journal writing, managing a portfolio, and practicing (spelling, computation, learning math through using tubs of manipulatives, and vocabulary). Begin by teaching your whole class to work independently and quietly on these tasks. Then move toward having half of the class work on the anchor activity (which can be adjusted to student readiness and interest), while the other half engages in a different content-based activity designed specifically for their needs. This may help you feel less fragmented in the beginning, because a sizable portion of the class will be engaged in work that is largely self-directed, freeing you to guide students in the newer and "less predictable" task. Later on, you can flip-flop the class, having the group that first worked with the anchor activity

switch to an appropriate content-based activity, and vice versa. Then, when you feel ready, you can have a third of the class working with an anchor activity and two-thirds working with two differentiated content-based tasks. All sorts of combinations are possible. Do whatever feels best to phase you and your students into an environment where multiple avenues to learning are the norm.

5. Create and deliver instructions carefully. Giving multiple directions to the class as a whole is confusing and calls too much attention to who is doing what. Creating and giving task cards or assignment sheets to individuals or groups works well, as does going over an assignment with a few responsible students today so that they can share it with their groups tomorrow.

6. Have a "home base" for students. Beginning and ending a class or lesson from a "home base" or seating chart enables you to organize students and materials more effectively.

7. Be sure students have a plan for getting help when you are busy with another student or group. You can help students learn to work collegially by suggesting that they ask a peer for clarification when they get "stuck." Some classrooms have an "expert of the day" desk where one or more students especially skilled with the day's task sit and serve as consultants. (Astute teachers ensure that many students serve as "experts"; students also assist by checking answers, proofreading, answering questions about directions or texts, and helping with art or construction tasks.) Or students may try to get themselves "unstuck" by "thinking on paper" in their learning logs. Be sure students know when it's okay to come to you for help—and when it's not—and that they know and use several options if they need help when you are unavailable. For you to successfully manage a differentiated classroom, your students must know that it's never okay for them to just sit and wait or to disrupt someone else.

8. Give your students as much responsibility for their learning as possible. Not only does fostering student responsibility make classroom management far more effective, it also helps young learners become independent—an important learning goal on its own. Students can pass out folders and other materials, critique

one another's work, move furniture for group work, keep records of their own work, chart their progress by using established goals, help design some of their own tasks, and make suggestions for smoother classroom operation. We often underestimate the capacity of students to be self-sufficient.

9. Engage your students in talking about classroom procedures and group processes. Your "metacognition," or thinking aloud about your thinking, helps students understand your expectations as well as rationales for those expectations. It also helps them develop ownership in their classroom. Having ongoing conversations about what you're all experiencing individually and collectively is a great investment in the future—saving much more time and stress in the long run than these conversations require at the time.

10. Use flexible grouping. In a differentiated classroom, you will often design tasks for students based on your best judgment of their readiness for and interest in those tasks. At such times, you will most likely want to assign students to the appropriate task. At other times, you may want students to quickly discuss an idea with a nearby or pre-assigned thinking partner. Or it may be more convenient to have students work with others at their table or to turn desks into a circle with four students in a cluster. Often, students can select their task partners, or they may need or prefer to work alone. Using a wide variety of grouping strategies allows you to match students and tasks when necessary, and to observe and assess students in a variety of groupings and task conditions. This flexibility also keeps students from feeling that they are "pegged" into a given classroom niche.

There are many other effective ways to develop a classroom in which students engage in a variety of interesting and engaging activities. Share your management-of-differentiation strategies with colleagues and ask them to share with you what works for them.

6
Preparing Students and Parents for a Differentiated Classroom

In a differentiated classroom, some of the traditional ground rules change. Your students and their parents will initially need your help to understand and feel comfortable with the new look and feel of the classroom. After an initial period of uncertainty, most students and parents respond quite positively to a setting that treats individuals as unique people and where learning is active and engaging. This chapter offers some strategies for making students and parents feel "at home" in a differentiated classroom.

Introducing Students to Differentiated Instruction: A Middle School Scenario

Mrs. Middleton begins the school year with a clear idea of how she wants her differentiated middle school English classes to work. Knowing she needs her students' help to reach that goal, she has developed an effective way both to orient her students to the environment she wants to create for them and to enlist their help in creating it.

First, Mrs. Middleton shows her students how to make a line graph. Students choose ways to describe the quality of something, which they then position as labels along the vertical axis. Each class chooses different descriptors, but the top (best) labels are often "awesome" or "way cool" or

"in orbit." The bottom (worst) labels tend to be "disaster zone" or "dismal" or "dead meat." Students also label several points in between the best and worst indicators. Next, Mrs. Middleton asks the students to put descriptors along the horizontal axis, such as "good in writing," "good in math," "good in soccer," "good in reading," "good in cleaning my room," "good in spelling." Then she asks them to add four or five descriptors of their own choosing. To help her students understand how to plot themselves on their graph, she makes a graph of herself on the board while the students watch. She plots herself as very strong with writing, very weak with math, pretty good with spelling, about average with soccer and cleaning her room, and so on. When she plots herself on each of her additional descriptors—"good with photography," "good with cooking," and "good with crossword puzzles"—she discusses her interest in each area. Students complete their graph for homework, and each day for the next couple of weeks, three or four students share their graph with the class. Then Mrs. Middleton's students tape their graphs, grouped by class period, on an empty classroom wall.

After a few days, Mrs. Middleton asks her students what patterns they see in the graphs, and she lists the ones they note. Students usually see several patterns quickly, especially the first two in the following list:

- Everybody said they are better in some things and worse in others.
- Nobody drew a flat line and said they were the same in everything.
- More girls than boys said they were good spellers.
- More kids in 5th period said they were good writers.
- People mostly added things they were good at.

Mrs. Middleton takes a minute to reflect on their responses, and then she poses this question to her students: "If you are different in your strengths—even in English (some of you said you were strong in spelling and weak in reading, for example)—what should I do about that?"

Her students' response to this question is usually that she should deal with them in different ways based on their differences. They often suggest that her main goal should

be to help them all grow, both in their strengths and in their weaker areas. Sometimes they say that this means they should not all do the same tasks all the time in class. Some older classes have even offered her specific examples, such as giving advanced spelling assignments to students who are great spellers, or less difficult writing assignments if writing is very hard for some students.

Then, over several days, Mrs. Middleton engages her students in discussions about how their class has to function if different things are going on in a single class period, and they help her establish rules for a class like that. They even discuss grading and decide that students should be graded on their individual progress, not in comparison to everyone else. The students talk about ways to set individual goals with the teacher, keep track of their own work and progress, and help one another succeed.

Mrs. Middleton concludes this "preparation" phase by summarizing what they've all agreed is necessary and putting a summary of their ideas on chart paper in front of the room. "In this classroom," she says, "'fair' will mean that all of us must live by the class rules, all of us must work hard, all of us must respect one another and encourage one another. It does not mean we'll all do the same things all the time." She lets her students know it is okay to come to her and say they'd really like to be working with a particular topic or project someone else is doing. "Lots of times," she assures them, "I'll be able to let you know when that will come up for you, because I'll make sure that all of you get your share of both the 'good stuff' and the 'drudge work.'"

Gradually, students begin practicing the procedures for distributing work folders, free reading, individual conferences with the teacher, individualized spelling, small-group projects, writing critique groups, and so on. Each day, Mrs. Middleton takes some time for metagcognition: She asks her students to briefly assess how they did as individuals and as a group toward achieving their operational goals and following their new ground rules.

Mrs. Middleton helps her students understand that some days she assigns them to tasks and work groups, and that some days they get to select for themselves. She also makes certain to use all sorts of grouping arrangements. She made a critical discovery about her grouping strategies

one day simply by overhearing a student say to a friend, "I think Mrs. Middleton stays up nights trying to figure out another way to scramble us up." Mrs. Middleton learned not only to give her students more insight into her grouping strategies, but also to ask her students to be active partners with her in figuring out how their work is going for them. Now she remembers to say from time to time, "Let me know if you think what you're doing is too hard or too easy for you, and I'll take a look at it with you. We can make changes when we need to." Another way she gives her students opportunities to be active partners with her is to occasionally allow them to design mini-contracts in which they work with an interesting activity they've seen or extend something they especially enjoyed doing.

In school—just like everywhere else—there's probably no such thing as a perfect day, but Mrs. Middleton and her students have lots of very good days, and few really rough days. Mrs. Middleton's classroom is a comfortable, busy, and respectful place, one that both teacher and students work to successfully create.

Helping Parents Learn About Differentiated Instruction

Most parents are eager for their students to learn, grow, succeed, and feel accepted in school. A differentiated classroom is an ideal place for those things to take place. You share those goals with your students' parents. It's just the way a differentiated classroom "looks" that's different from what parents may expect. You can help them develop a clear, positive understanding of differentiated instruction and how it benefits their children. Let them know that:

- The goal of differentiated instruction is to make certain that everyone grows in all key skills and knowledge areas, moving on from their starting points.
- In a differentiated classroom, the teacher closely assesses and monitors skills and knowledge levels for all students, and then plans lessons and tasks with those levels in mind.
- You will be glad to have parents come and talk with you about their children because you value their input and want to share your insights with them.

• A goal in your classroom is to help each student become a more independent learner.

Successful partnering is based on proactive communication. Send home information bulletins or newsletters from time to time, giving information about goals for specific projects, how various procedures are working in class, and so on. Ask for parents' reactions and suggestions related to differentiation. Build partnerships with parents, just as you do with your students, to create a classroom in which individuals are honored and much is expected from every student.

7
The How-To's of Planning Differentiated Lessons

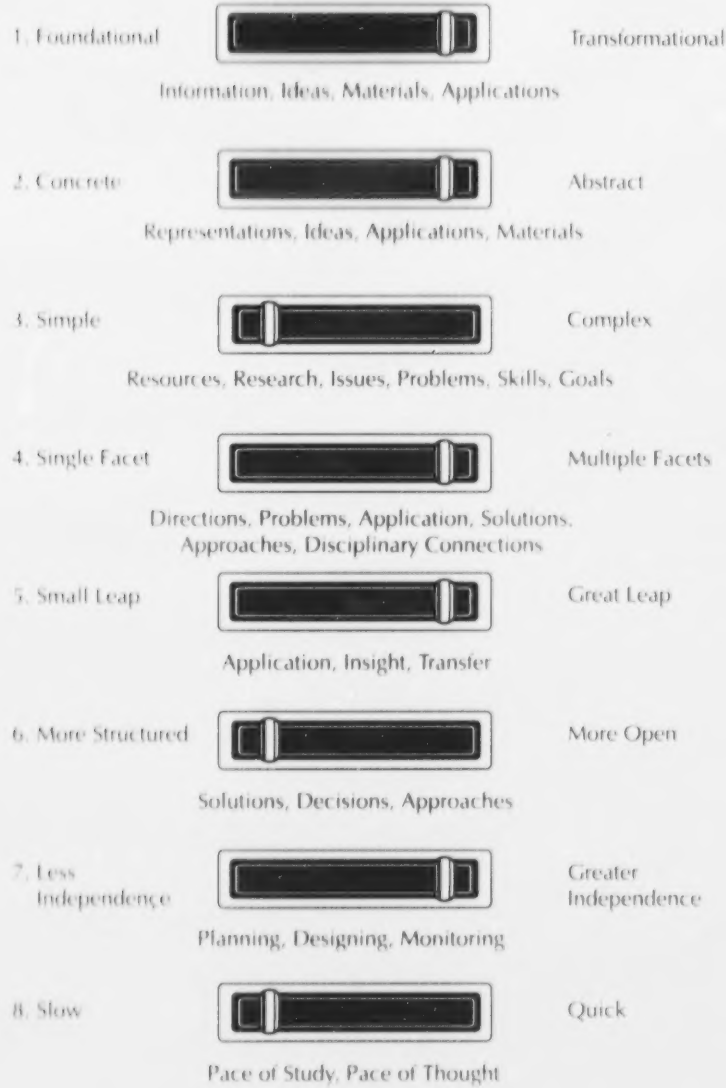
EXPERT TEACHERS OFTEN DO THE EQUIVALENT OF "PLAYING BY EAR" when they differentiate instruction in their classrooms. That is, they simply do what seems right for their students. Generally, intuition begins the process, and over time teachers learn from their successes and failures, refining what they do as they go along. Thus when we ask teachers how they plan a differentiated lesson, their answers are often a bit vague: "I just try to match the tasks to the students' readiness level," or "I try to involve the students in planning with me," or "I put them in groups I think will work."

Thinking About Differentiation

To differentiate instruction in your classroom successfully, it helps to have a comprehensive guide for planning and monitoring the effectiveness of differentiated curriculum lessons. One way to get specific guidance about what teachers do when they create differentiated lessons is to study those lessons and discover what makes them differentiated. We can also learn much by asking "What supports the instinct to differentiate instruction?" Figure 7.1 is an answer to that question—derived from looking at many examples of differentiation. I call the tool in this figure "the equalizer."

FIGURE 7.1

The Equalizer: A Tool for Planning Differentiated Lessons



Designing differentiated instruction is similar to using the equalizer buttons on a stereo or CD player. You can slide the buttons across several different continuums to get the best combination of sounds for each musical piece. In a differentiated classroom, adjusting the "buttons" appropriately for various students' needs equalizes their chances of being stimulated and challenged by the materials, activities, and products in your classroom.

• **Foundational to Transformational.** When an idea is new to some students, or if it's not in one of their stronger areas, they often need supporting information about the idea that is clear and plainly worded. Then they usually need time to practice applying the idea in a straightforward way. In these instances, the materials they use and the tasks they do should be foundational—that is, basic and presented in ways that help them build a solid foundation of understanding. At other times, when something is already clear to them or is in a strength area, they need to move along quickly. They need information that shows them intricacies about the idea. They need to stretch and bend the idea and see how it interacts with other ideas to create a new thought. Such conditions require materials and tasks that are more transformational. For example, one child may benefit from a more basic task of classifying animals by body covering, while another may need the more transformational task of predicting how changes in environment would likely affect the body covering of several animals. In a math class, one young learner may be ready for a basic application of the concept of fractions by cutting fruit and placing it to reflect a given fraction. An appropriate challenge for another student may be the more transformational task of writing measures of music that represent certain fractions.

• **Concrete to Abstract.** Students usually need to become familiar with the key information or material about an area of study before they can successfully look at its implications, meanings, or interrelationships. However, once they have grasped the information in a concrete way, it's important that they move on to meanings and implications. Working with concrete information should open a door for meaningful abstraction later on. For example, grasping the idea of plot (more concrete) typically

has to precede investigations of theme (more abstract). But ultimately, all students need to delve into meanings of stories, not just the events. The issue here is readiness or timing.

• **Simple to Complex.** Sometimes students need to see only the big picture of a topic or area of study, just its "skeleton," without many details. Even adults often find it helpful to read a children's book on black holes, for example, before they tackle the work of Stephen Hawking. When the big picture is needed, your students need resources, research, issues, problems, skills, and goals that help them achieve a framework of understanding with clarity. On the other hand, when the "skeleton" is clear to them, they'll find it more stimulating to add "muscle, bone and nerves," moving from simple to complex. Some students may need to work more simply with one abstraction at a time; others may be able to handle the complexity of multiple abstractions. For example, some students may be ready to work with the theme in a story (a single abstraction), while other students look at interrelationships between themes and symbols (multiple abstractions, or complexity).

• **Single Facet to Multiple Facets.** Sometimes students are at peak performance when working on problems, projects, or dilemmas that involve only a few steps or solutions to complete. It may be all that some students can handle to make a connection between what they studied in science today and what they studied last week. Those with greater understanding and facility in an area of study are ready for and more challenged by following complicated directions. They are more challenged by solving problems that are multifaceted or require great flexibility of approach, or by being asked to make connections between subjects that scarcely seemed related before.

• **Small Leap to Great Leap.** Note that this continuum does not provide the option of "no leap." Students should always have to run ideas through their minds and figure out how to use them. Activities that call only for absorption and regurgitation are generally of little long-term use. But for some students, learning about how to measure area and then applying that learning by estimating and verifying the area of the hamster house compared to the teacher's desk

may be enough of a leap of application and transfer—at least in the beginning. Other students may be able to move from estimating and verifying area to estimating materials needed for a building project and proportional cost implications of increasing area. In both cases, students make mental leaps from reading information on a page to using that information. The latter task calls for relatively greater leaps of application, insight, and transfer.

• **Structured to Open-Ended.** Sometimes students need to complete tasks that are fairly well laid out for them, where they don't have too many decisions to make. Novice drivers begin by managing the car on prescribed driving ranges or delineated routes. Being new to a computer or word processor often requires completing programmed and closed lessons that involve "right" answers to become knowledgeable—and comfortable—with basic operation and keyboarding before moving on to more advanced and open-ended tasks such as selecting varied uses of graphics to illustrate ideas in a formal presentation. Following a predetermined format for a writing assignment or a chemistry lab often makes more sense than improvisation. At other times, however, students are ready to explore the computer, craft their own essays designed to address a communication need, or create a chemistry lab that demonstrates principles of their choosing. Modeling helps most of us become confident enough to eventually "wing it." But when modeling has served its purpose, it's time to branch out and get creative.

• **Dependent to Independent.** A goal for all learners is independent study, thought, and production. But just as some students gain height more quickly than others, some will be ready for greater independence earlier than others. Their needs in developing independence generally fall into one of these four stages:

1. *Skill building,* when students need to develop the ability to make simple choices, follow through with short-term tasks, and use directions appropriately.

2. *Structured independence,* when students make choices from teacher-generated options, follow prescribed time lines, and engage in self-evaluation according to preset criteria to complete longer-term and more complex tasks.

3. *Shared independence*, when students generate problems to be solved, design tasks, set time lines, and establish criteria for evaluation. The teacher helps "tighten" or focus the plans and monitors the production process.

4. *Self-guided independence*, when students plan, execute, and evaluate their own tasks, and seek help or feedback only when needed (Tomlinson 1993).

By guiding students across this continuum at individually appropriate speeds, you and your students are less likely to become frustrated by tasks that require greater independence.

• **Slow to Fast.** Of all the continuums, this one is the most likely to require some "jumping around." There are times when students with great ability in a subject need to move quickly through familiar or minimally challenging material. But at other times, some of those same students will need more time than others to study a topic in depth. You can adjust the speed of learning experiences for students who are struggling with key ideas by allowing them to work more slowly at first, but then letting them move quickly through tangential areas of study, thus freeing up some time for further work with the key ideas. Matching pacing to your students' needs is a critical differentiation strategy.

Like the equalizer buttons on audio equipment, it's possible for the teacher to design lessons by "moving the buttons" on this guide to different positions for the needs of varied students. For example, some students may be able to handle a complex, abstract, multifaceted project (buttons over to the right) if you keep the "independence" button toward the left; that is, require more "check-in" dates of them than you require of more self-guided students working on that same project.

Equalizer Troubleshooting Tips

When using the heuristic guide in Figure 7.1 to modify lessons for a differentiated classroom, keep in mind three essential caveats:

1. All students need lessons that are coherent, relevant, powerful, transferable, authentic, and meaningful. We

should not consign some students to drill and practice as the staple of their school diets and save the rich and engaging lessons for others.

2. A curriculum that is good for students pushes them a bit beyond what they find easy or comfortable. Our best teaching happens when we give students a genuine challenge and then help them successfully meet it. Differentiated instruction is so powerful because it offers various levels of genuine challenge. Your students' sense of self-efficacy comes from recognizing their power after accomplishing something they first thought was just "too big" for them. Design your lessons to stretch all students beyond their comfort zones in knowledge, insight, thinking, basic skills, production and presentation skills, and affective awareness.

3. Plan to encourage your students to "work up"—that is, be ready to match students to tasks that will stretch them. A good task for a given student is one that is just a bit too hard and through which the teacher ensures the presence of support required for success. We err most often as teachers by planning a single task that is easy enough for most students to complete. That has the effect of establishing both "middling" or low expectations for many learners and expectations still out of the reach of others. A task is challenging for a given student when it causes that student to stand on "mental tip toes" and reach high to complete it well.

This guide for differentiating instruction gets at the heart of what many teachers do when they adapt instruction for varied learner needs—albeit automatically. Use this guide when differentiating content (what you teach and what students learn), process (how students think about or make sense of ideas and information), and product (how students show what they know). Add other continuums and descriptors to this guide as your students teach you more about how to differentiate instruction.

8
Differentiating Content

IT IS DIFFICULT AND SOMEWHAT UNNATURAL TO CARVE APART THE curricular elements of content, process, and product, because students process ideas as they read, think while they create products, and conjure ideas for products while they encounter ideas in the materials they use. Nonetheless, thinking about how to differentiate instruction is more manageable by examining one element at a time. Just proceed with the awareness that these elements are more interconnected than they may sound here.

Content is what we teach, what we want students to learn. It can also be thought of as input. As illustrated in the continuums in Figure 7.1, some students will be ready for more complex, multifaceted, abstract, and independent approaches to exploring or taking in ideas, while other students may still need fairly simple, concrete, and single-faceted approaches to the same information and ideas. Here are some strategies for differentiating content in a class where students don't all need the same information, presented in the same way, over the same time span. Use these strategies as tools that help you vary the "buttons" on the differentiation equalizer in Figure 7.1, thus making management of multitask classrooms possible.

Concept-Based Teaching

In many classrooms, students "cover" lots of facts, vocabulary words, names, dates, and rules. Unfortunately, they also forget much of what they "learn" as they leave that information behind and move on to another topic or lesson. Much of this "memory loss" occurs because they never really understood or saw the purpose of what they

learned. Rather than slogging through a swamp of facts, you can help your students better understand and see utility in an area of study by emphasizing its key concepts and principles. For humans, concepts are the building blocks of meaning. Instead of spending a month memorizing categories of animals or studying penguins, students can use that same time to study patterns in the animal kingdom, talk about traits, use traits to identify and classify animals, and learn how to predict traits from habitats or vice versa. "Patterns" is a concept that undergirds how scientists look at and classify things. Having students become adept at determining and predicting patterns and using those patterns to think about various forms of life helps them (1) understand rather than memorize, (2) retain ideas and facts longer because they are more meaningful, (3) make connections between subjects and facets of a single subject, (4) relate ideas to their own lives, and (5) build networks of meaning for effectively dealing with future knowledge. Differentiated instruction is so powerful because it focuses on concepts and principles instead of predominantly on facts. Teachers who differentiate instruction offer minimal drill and practice of facts, which tends to create little meaning or power for future learning; they focus instead on essential and meaningful understandings to create transferable learning power.

One elementary teacher uses a differentiated unit to study the concept of extinction. Her class explores two key principles: (1) extinction can come about because of natural changes in the environment, and (2) extinction can come about because of human-made changes in the environment. One group uses dinosaurs as an example of extinction and investigates changes that may have caused their extinction. Another group compares the dinosaurs' extinction to today's rain forests, looking for similarities and differences in extinction patterns. Both groups encounter powerful scientific principles, specific examples, a need to hypothesize and draw conclusions. But one group studies this content in a more foundational, concrete, single-faceted way, while the other group conducts an exploration that is more transformational, abstract, and multifaceted. The teacher proactively matches the "equalizer buttons" of the tasks and materials to each group's current learning needs.

Being sure of key concepts and principles in what you teach is a great way to begin thinking about differentiation. It also makes your teaching more relevant and potent in general.

Curriculum Compacting

This strategy was developed by Joe Renzulli at the University of Connecticut and is specifically designed to help advanced learners maximize their use of time for learning. Compacting is a three-stage process. In Stage 1, the teacher identifies students who are candidates for compacting and assesses what they know and do not know about a particular topic or chapter. Students may request compacting or the teacher may decide to "compact" a student. Initial assessment occurs either prior to or early in the study. Assessment may be formal, such as a written post-test; or informal, such as the teacher and student having a focused conversation about the subject being studied. Following this assessment, the teacher notes which skills and understandings each student has reasonably mastered (i.e., knowing 70 to 75 percent or more of the content). Students who are compacting are exempt from whole-class instruction and activities in content areas they have already mastered, thus "buying time" for learning more challenging and interesting material.

In Stage 2, the teacher notes any skills or understandings covered in the study in which the student did not demonstrate mastery, and then lays out a plan to make certain the student learns those things. The plan may require the student to join other classmates for particular portions of the study, do homework that provides practice on missing skills, or demonstrate mastery of those skills in a product that is created in the third and final stage of the compacting process.

At the beginning of Stage 3, the teacher and student design an investigation or study for the student to engage in while others are working with the general lessons. The teacher and student together agree on the project's parameters, goals, time lines, procedures for completing the tasks, criteria for evaluation, and any other necessary

elements. The student does not have to reinvest freed-up time in the same subject from which he was compacted. One student who compacts out of math, for example, may elect to spend his time working on a project in a special interest area such as science fiction. Or, if he especially likes math, he might want to develop a plan for using advanced mathematics software available in class.

Keeping records when using compacting has three benefits: (1) teachers demonstrate accountability for student learning, (2) parents understand why it is advantageous for their children to work with an alternate task, and (3) students develop awareness of their specific learning profiles. Advanced learners gain little by continuing to relearn the known, but they gain much from the expectation that they will continually engage in challenging and productive learning in school. Compacting helps eliminate the former and facilitate the latter.

Using Varied Text and Resource Materials

Grade-level texts are often far too simple for some students in a given class, and yet too complex for others. Using multiple texts and combining them with a wide variety of other supplementary materials increases your chances for reaching all your students with content that is meaningful to them as individuals. You can develop valuable differentiation resources by building a classroom library from discarded texts of various levels (or requesting that textbook money be used to buy three classroom sets of different books rather than one copy of a single text for everyone), and by collecting magazines, newsletters, brochures, and other print materials. Other things being equal, advanced learners will usually use advanced texts, but may occasionally find it helpful, when beginning a complex study, to read about a topic in the more straightforward presentation found in a less-challenging source. Likewise, struggling learners may from time to time understand an idea better by looking at the diagrams or pictures in a more advanced text.

As students' task needs vary, so can their use of all resources. Many computer programs present increasing

levels of challenge and complexity. In math or science, some students may need to use manipulatives to understand a concept, while others can move directly from an explanation or reading to abstract use of that concept without working with manipulatives. Some videos present key ideas with clarity, others extend explorations with greater breadth and depth than may be desirable for students less advanced with that topic. The key is to match the resource materials' levels of complexity, abstractness, depth, breadth, and so forth with each student's learning profile and dynamic points of understanding.

Learning Contracts

Learning contracts between teachers and students come in several varieties. One allows students some freedom in their use of class time in exchange for doing responsible and effective work. Contracts can contain both "skills" and "content" components, and are helpful in managing differentiated classrooms because the components of a contract can vary with a student's needs. For example, students in a 4th grade class are all using contracts. Jake's specifies that during contract time in the week ahead he must complete his next two spelling lists, master two levels on the computer program on division by one digit, and work with the characterization project from a novel of his choosing. Jake's spelling lists are a bit above grade level, reflecting his comfort as a speller. Because his math work is below grade level, extra time with the computer may help him move along more confidently. The novel Jake selects can be based on his interests, and his task with it—thinking and writing about himself in comparison to the main character—has been designed to help him think through the key strategies a writer uses to build characters. Jenny has also made a contract that includes spelling, computer work, and a novel. Rather than a spelling list, she uses an advanced vocabulary strategy because she spells several years above grade level. Jenny will use the computer program to practice division by three digits. She will also select a novel that she likes, analyze the main character, and create an opposite or mirror image

character by applying traits of characterization. Both students get to map out their plan of action for the week, decide which tasks will be done in school and which at home, and progress at a rate and depth of content challenging for them. Both are accountable for their time and self-management, and understand that their teacher will assign them work if they violate their contract obligations. Jake and Jenny share a table with two friends who are also working on contracts that differ somewhat from theirs.

Contracts combine a sense of shared goals with individual appropriateness and an independent work format. They also give the teacher time for conferences and small-group or individual work sessions based on progress and needs.

Varied Support Systems

You can make content of varying complexity levels more accessible to your students by using a variety of support systems, such as study buddies, reading partners, audio and video recorders, and peer and adult mentors. These strategies help all students stretch their capacities as learners.

Study Buddies. Sometimes a more able learner can study or review an assignment with a student who is less comfortable with the task. At other times, it works well to create pairs of students who communicate well and whose understanding and performance are similar. In each pair, try to have one student who is more skilled in summarizing, asking questions, attending to directions, and so on.

Reading Partners and Audio/Video Recorders. A 5th grader can be great at audiotaping books for 2nd graders who need assistance with their reading. A 3rd grader who records a grade-level book can help create enriching materials for a classmate who has trouble decoding or reading long passages. High school students can create tapes summarizing journal articles on a particular topic to give advanced 6th graders access to materials beyond the scope of their classroom or school library. Some of those 6th graders can help 4th graders learn how to make a

speech by making a video on the subject. An advanced 4th grader can make a video on the types of buildings in the community, which could then be used in a kindergarten learning center.

Peer and Adult Mentors. Adults often volunteer to help youngsters who are behind with their work and in need of additional guidance. All learners—not just those who are struggling—benefit from time with adults who can answer questions about shared interests, probe their thinking, or give them access to advanced research skills. A bright 5th grader can also be a great mentor for an advanced 3rd grader who shares similar interests. You can create extensive support systems by using people and technologies in your classroom, school, and community, thus giving everyone a chance to reach higher, learn more, and contribute to one another's learning.

No doubt you have other ways to match content to learner readiness that work well for you and your students. The goal when differentiating content is to offer learning experiences that meet students individually where they are on the learning continuums and support their forward progress.

9
Differentiating Process

WHEN STUDENTS ENCOUNTER NEW IDEAS OR INFORMATION, THEY need time to run the input through their own filters of meaning. As they try to analyze, apply, question, or solve a problem using the material, they have to make sense of it before it becomes "theirs." This processing or sense-making is an essential component of instruction because without it, students either lose the ideas or confuse them.

Students who already understand how to convert fractions into decimals don't need to do an activity designed to help them make sense of the underlying principles; they have already processed and made sense of those ideas. Students who are foggy about fractions aren't ready to benefit from a sense-making activity on converting fractions into decimals; they need an activity that helps them further clarify fractions.

Any effective activity is essentially a sense-making process, designed to help a student progress from a current point of understanding. Students process and make sense of ideas and information most easily when their classroom activities

- Have a clear purpose.
- Focus on a few key ideas.
- Guide them in understanding the ideas and the relationships among them.
- Offer opportunities to explore ideas through varied modes (e.g., visual, kinesthetic, spatial, musical).
- Help them relate new information to previous understandings.
- Match their level of readiness.

Teachers have developed hundreds of strategies for helping students make sense of ideas. Among these

strategies are learning logs, journals, graphic organizers, creative problem solving, cubing, think-pair-share, synectics, mind-mapping, two-sided debates, PMI (listing pluses, minuses, and interesting points about a topic under consideration), role-playing, model making, and labs. Tiered assignments or parallel tasks at varied levels of complexity and abstractness are also powerful vehicles for differentiating process. Each strategy engages your students in a different thinking or processing response. Sense-making activities are most effective for students when that response matches their learning needs. Such activities are also more likely to be engaging and motivating from your students' perspective.

These instructional strategies are ideal for offering differentiated sense-making or processing options for students in mixed-ability classrooms. The following three scenarios show how teachers use some of these strategies to help their students process and "own" key ideas in ways that work best for them.

Mr. Jackson and Cubing

Students in Mr. Jackson's 2nd grade class are studying communities. Right now, they are examining ways in which animal communities are like and unlike human communities. Last week, students viewed a video about ants. Yesterday, they read about bees and individually selected one other animal to learn about from a list Mr. Jackson provided. Today, as they proceed with their study, Mr. Jackson makes sure his students understand the elements of a community and how they might apply to animals. To help his students think about and make sense of these ideas, he uses cubing. Each six-sided cube carries these instructions for students: describe, compare, tell your feelings about, tell the parts of, use, and tell the good and bad things about.

Mr. Jackson assigned each student to use either a blue or green cube. Students using blue cubes are performing at or below grade level in reading and writing. Blue cube tasks are to

1. Describe an ant community in pictures or words.

2. Compare an ant community to your community in pictures or words.
3. List words that describe your feelings about watching an ant community.
4. Tell the parts of an ant community and what goes on in each part by using words or pictures or by building it.
5. Tell a way that an ant community helps you understand living and working together in a community.
6. Tell the good and bad things about an ant community.

Students using green cubes are performing above or well above grade level in reading and writing. Green cube tasks are to

1. Describe an ant community using at least three sentences with at least three describing words in each sentence.
2. Use a Venn diagram to compare an ant community with the community of the animal you selected.
3. Pretend that ants think like people. Write and cartoon what you think an ant feels like as it goes through a day in its community. Do the same thing with another kind of animal from a different sort of community.
4. Make a diagram of an animal community with parts labeled and tell what each part is for.
5. Write a rule for living together in a community and tell how it would be useful in two different communities.
6. Write a song or draw a picture that tells what you think is best and worst about being part of a community.

Students begin cubing by sitting at a table with other students using cubes of the same color. Students take turns rolling their cube. If the first roll turns up a task the student doesn't want to do, a second roll is allowed. As they work on their own task, students can also help one another.

When their tasks are complete, Mr. Jackson rearranges the seating so that groups of four to five students who did a same-colored cube task can share with each other their varied ideas and approaches on a similar topic.

Blue cube tasks help learners think in a variety of ways about how key elements of community apply to a single animal community. Green cube tasks help learners make such connections among several animal communities. Compared to the blue cube tasks, green cube tasks are more transformational, complex, multifaceted, and require greater leaps of insight and transfer. Later in the unit, students who completed blue cube tasks will complete some of the green cube tasks either in small groups or by working directly with Mr. Jackson. Thus, all students engage in idea and information processing activities that not only match their learning profiles and current needs but also coax them forward on many learning continuums.

Mrs. Miller and Interactive Journals

Mrs. Miller's 6th graders are all reading the novel *Tuck Everlasting*. She knows that the book is difficult for some of her students and doesn't much stretch some others, but she likes to have the class read some books together, just as she sometimes finds it useful to have several different novels read by her students simultaneously. Because the current novel is not a "best fit" for all learners in her class, she is making a special effort to ensure that she uses a differentiated process strategy that she does vary according to the student's readiness and interest. By using differentiated interactive journals throughout this novel, Mrs. Miller provides her students with writing prompts that, for example, may encourage them to interact with the book as they predict what will occur next, reflect on something that has just taken place, apply understandings about elements of literature such as conflict or figurative language, relate to a character or situation, or grapple with meanings central to the authors' purposes in writing the book.

In the past, Mrs. Miller has given all students the same interactive journal prompts. This year, in trying to craft a

differentiated classroom, some days she gives varied journal prompts to her students based on their interests and needs. On other days, all students will have the same prompt because it is essential for all of them to think about a common idea.

On the day prior to beginning the novel, she asks students to jot down what they think the word "everlasting" means. Based on those responses, as well as her cumulative knowledge about the students, she gives three different journal prompts on the next day as class begins. Students who seem unfamiliar with the word work in pairs to do the following:

1. Guess what "everlasting" means and write their "best guess" explanation.
2. Find definitions of the word in two dictionaries and use what they learn from the dictionary to write a good 6th grade definition of the word.
3. Write a definition of "everlasting" that would be crystal clear to a 1st grader.
4. Illustrate at least five things that they believe are everlasting, including defending why they think so.
5. Hypothesize what they think a book called *Tuck Everlasting* might be about.

A larger group of students who seemed to understand the word in the brief preassessment activity but whose general vocabulary and comprehension are generally within the expected range for 6th graders work either alone or with a partner on these tasks:

1. Hypothesize what a book called *Tuck Everlasting* might be about and explain how they came to their hypothesis.
2. Present and defend their choices of what sorts of things would be included as everlasting in a book written about everlasting things in their own lifetimes.
3. Present and defend their choices of what sorts of things would be included as everlasting in a book written about life 200 years ago.

4. Present and defend their choices of what sorts of things would be included as everlasting in a book written about life 200 years into the future.

Finally, a small group of students with very advanced skills of vocabulary, writing, and abstraction work together as a group to do the following:

1. Place on a continuum of "less enduring" to "more enduring" a list of items such as gold, coal, love, friendship, energy, time, fear, happiness, and additional items of their choosing.
2. Write a poem or paragraph that expresses their reasoning in placing the items on the continuum.
3. Hypothesize what a book called *Tuck Everlasting* might be about and be ready to defend their hypothesis.

All students in the class use interactive journals, have a task that causes them to make leaps of thought and insight and to deal with a powerful and central concept in the book they are about to begin reading together. These three interactive journal assignments themselves, however, are increasingly transformational, abstract, open-ended, and require increasingly greater leaps of thought for successful completion. When class starts on the day they begin the novel, Mrs. Miller accommodates her students' varied pacing needs by distributing their journal assignment sheets, giving the instruction to read at least the first 25 pages of the novel, and then letting them be free to work as long as necessary in class on the journal prompt and complete the rest at home that night. This attention to pacing allows each student to work at a comfortable pace; ensures that all students have adequate, purposeful work to do during the class period; and offers enough time so that all should be prepared for a short, whole-class discussion at the beginning of class on day two of the novel unit.

Sense-making strategies help students process and "own" ideas and information in ways that work best for them. The next chapter on differentiating products describes strategies that allow students to demonstrate—again, in ways that work best for them—the results of all that processing.

10
Differentiating Products

UNLIKE A SENSE-MAKING ACTIVITY, WHICH IS TYPICALLY SHORT AND focuses on just a few key understandings, a product is a long-term endeavor. Product assignments should help students— individually or in groups—rethink, use, and extend what they have learned over a long period of time—a unit, a semester, or even a year. Products are important not only because they represent your students' extensive understandings and applications, but also because they are the element of curriculum that students can most directly "own." For that reason, well-designed product assignments can be highly motivating because they will bear their creator's thumbprint.

Guidelines for Successful Product Assignments

Before designing differentiating product assignments for grade, interest, and readiness levels, it helps to understand principles that apply to successfully differentiated products in general.

Design Principles

1. Build assignments around a theme, concept, or issue that is important to the topic being studied.
2. Help your students see the ideas at work in the world.
3. Instead of having one project assignment for all, use variations on a theme to address individual interests and readiness levels.

4. Be sure all students' product assignments should make them rethink ideas and information previously studied so that they draw on key skills and understandings important for the unit, quarter, semester, or year.
5. Talk with your students about the need for both critical and creative thinking. Help them build a passion for ideas being pursued.

Production Principles

1. Require that your students use and synthesize or blend multiple sources of information in developing their products.
2. Give clear and ample directions for their products as a way of guiding *quality*, but leave room for a great deal of individual student choice within the context of clear direction.
3. Stress planning and use check-in dates as needed to match students' levels of independence. Zap procrastination.
4. Ensure that students actually use the entire block of time allotted to the project.
5. Support your students' use of varied modes of expression, materials, and technologies.
6. Be sure to help your students learn required production skills, not just necessary content.
7. Communicate with your students' parents regarding timelines, requirements, rationale for the product, how they can help, and what they should avoid doing during creation of the product.

Assessment Principles

1. Clearly lay out criteria for success in content and production. Some criteria will apply to the whole class, some to specific products, some should be crafted by individual students based on their interests, and some should be crafted by you to challenge individual students. Each student will have different criteria for success.

2. Use formative (during the project) and summative (after the project) peer and self-evaluation based on the agreed-upon criteria for content and production.
3. Set a clear standard of high expectations for your students' products. Take them very seriously in conversations and planning with your students.
4. Let your students know that you'll be arranging for their products to be viewed or used by someone other than just you.

A Differentiated Kindergarten Product

Mrs. Appleton's kindergartners have been studying neighborhoods and communities. As a final product, they are going to research, design, and build a portion of their town, showing its neighborhoods and communities. The whole class is working as a group to create and share the final model, which will be quite large. The class will make some decisions and do some tasks as a whole, such as deciding the basic contents of the model and making "blank buildings" that will be turned into representations of actual buildings later. Students will select other facets of the work based on their interests: Everyone selects one community member to interview as a way of gathering data, some students have selected to make signs for buildings, and each student selects a neighborhood to work on in the model. Mrs. Appleton will assign some tasks, however, to draw on and extend each student's strengths. Students more skilled with measuring will measure and draw building dimensions. Students with strong fine motor skills will cut some of the complex pieces, and others not so skilled in that area will assemble some of the larger pieces of the model. Mrs. Appleton will ask students who are already reading to look up information and help make signs. She carefully designed this project to ensure that all students do both self-selected and teacher-selected (readiness-based) tasks. Mrs. Appleton also makes sure that some tasks require students to work collegially, while others require independent work.

Differentiated Secondary Products

Students in Mr. Garcia's Spanish II class are working on language and culture projects. A goal for all his students is to understand more fully how elements of a given culture interrelate and form a distinct personality of a people. Many students will explore the culture of Spain by writing travel guides, making videos, filming documentaries, or presenting dramas. They will investigate history, religion, economics, celebrations, geography, education, climate, literature, art, language structure, and how those elements are interrelated. Although students have several product requirements laid out for them, they will add some of their own criteria for success. They also can choose whether to work alone or in a small group, which mode of expression they will use, and which cultural elements they will focus on.

Three students in the class are quite advanced in their grasp of Spanish because language is a high talent area for them; and for two students, Spanish is their first language. Mr. Garcia wants these three students to work with the same concepts as the other students in the class—but to stretch their thinking, he will differentiate their assignment and ask them to do cross-cultural comparisons. They will examine elements of language and culture across at least three language groups other than Spanish, none of which can be a modern Romance language. These students will examine languages such as Swahili, Farsi, Chinese, Japanese, Hebrew, and Russian, as well as the cultures from which those languages arise. These advanced students have a bit more freedom in designing their final products and the processes for reaching their final destinations. And like the other students in the class, they can also select whether to work alone or with peers and the form through which they will express their learning.

Differentiating Product Assignments for Advanced Learners

As is the case with content and process, the idea with product design for advanced learners is to ensure that they actually have to stretch their information base, understanding, thought processes, planning and production skills, and self-awareness. Product assignments that are

quite challenging in these ways for many students often fall short of a genuine challenge for students highly able in a given subject. Moving the "equalizer buttons" (see Figure 7.1) over toward the right as you modify product assignments for these learners is your goal. Here are a few principles useful for adapting product assignments for advanced learners.

Design Principles

1. Be sure to structure product assignments for advanced learners so that they're being stretched forward on all learning continuums—complexity, independence, transformation, abstractness, multifaceted solutions, and great leaps of insight.
2. Consider having advanced learners study the key issues or questions across time periods, disciplines, or cultures.
3. As much as possible, include advanced-level research, such as advanced materials, multiple materials, primary sources, original documents, and student-conducted original research.

Production Principles

1. Consider letting advanced students begin their projects earlier than other students if the complexity of their products warrants it. Working on their products might then become an ongoing assignment when they compact out of classwork and when they do not need to do the homework practice important for other learners.
2. Whenever possible, have each advanced learner work with a mentor—someone who works avocationally or professionally with the topic being explored.

Assessment Principles

1. Let each advanced learner help you develop criteria for expert-level content and production. Work together to determine issues that experts would feel must be dealt with in the product exploration, ways

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in which those issues should be dealt with, and procedures and standards for production that would be important to an expert. Use these as benchmarks for student planning and assessment.

2. When it would be helpful to do so, have advanced learners' products assessed by an expert in the field on which the product is based. In some instances, expert assessment is most helpful at a *formative* or in-process stage of work so that the student can clarify and extend ideas prior to completion of the product. In other instances, *summative* or end-stage assessment by an expert is useful for advanced learners who want to test their product against an authentic and high standards. It is often the case that teachers lack some of the knowledge and skills of a professional in a given area of study. Helping advanced learners gain access to those skills and understandings is an important way of ensuring that they stretch their capacity instead of continuing to be rewarded for "doing what comes naturally."

Final Thoughts on Differentiating Products

The ways to design, support, and assess challenging product assignments are endless. Just remember to provide written guidelines, which may be lengthy at times, so that students have adequate structure, challenge, and clarity of purpose and expectations.

Differentiating product assignments in a mixed-ability classroom is beneficial for several reasons. All products relate to key concepts that are discussed in class and conversations among the groups are common as they work on their individual or small-group products. Yet by offering variations on the tasks, you allow all students to draw on their interests and strengths, and to confront—and grow from—appropriate challenges.

11
Assessment in a Differentiated Classroom

By now, it should be clear that in a differentiated classroom students often work at different paces and are assessed according to varied learning goals. Two important features of a differentiated classroom are students' rights to "begin where they are" and to expect to grow as learners. But charting and acknowledging the academic growth of individual students in a differentiated classroom can create a dilemma for teachers whose schools still use a traditional report card and grading system. On the one hand, the public expects "normed" report cards. On the other hand, ample evidence indicates that traditional grades may not communicate or motivate as we would like to believe they do (Ornstein 1994). Here are four approaches to this problem that have proven useful.

Changing the Traditional Grading System

Before doing away with a traditional grading system, some teachers and schools have found that it's important to explain to students and their parents how the new system will work. Students and parents learn that the new grading system is based on individual goal setting and progress in reaching those goals, and that students will be "graded against themselves" rather than in competition with other students. Portfolio-type assessment and reporting of progress work well in such settings.

Other teachers and schools choose to combine traditional letter grades on report cards with an additional piece of information. The report card carries the information that an *A* still means excellent performance, a *B* means good performance, and so on. But each letter grade now also carries a numeric "superscript": a *1* means working above grade level, a *2* means working at grade level, and a *3* means working below grade level. Thus, students who achieve an A^1 are clearly working hard and progressing well, even though their work is not yet at grade-level norms. A report card using this grading system probably offers more information than a traditional report card.

Another approach is to give two grades—a personal one and a "traditional" one. Thus, a struggling learner might receive a *B* on progress toward reaching personal learner goals and a *D* when compared with the class. An advanced learner who is not "pushing his own ceiling" might get a *C* in progress toward personal goals and an *A* in comparison with the rest of the class. When using this type of system, it is important to help parents and students clearly understand the utility of each piece of information in educational planning.

Finally, some educators urge teachers to routinely share varied sorts of information with parents and students, such as personal grades or portfolios that help everyone see and understand a student's progress, grades or other information that shows how a student compares with classmates, and nationally normed data that may give a picture of that student compared with a still larger group (Gilman and McDermott 1994). Again, parent education and partnership are important in such instances.

In the best of worlds, the first alternative has much to commend it. In the real world, any system that encourages personal growth in every student should be the goal and may be achieved, at least in part, in a variety of ways.

Handling Concerns of Advanced Learners and Their Parents

When switching to a grading system where students compete against themselves, the learners most likely to encounter initial difficulty are high-ability students who have not had to work hard to get good grades. Sometimes it

takes a while for these students to develop work habits and standards that challenge their abilities. During this transition time, their grades on tests, projects, or report cards may be lower than they and their parents are accustomed to. In such cases, it is critical that you help both students and parents understand the value of teaching children to "reach high."

Unfortunately, many high-ability learners don't encounter a real challenge until they take an advanced high school course or get to college. The first time they meet failure—or something other than predictable success—they may panic. Their self-esteem can be greatly diminished or completely destroyed. They often remove themselves from the situation in frustration and fear. Even if they do try to meet the challenge, they frequently find they have no sense of how to study or to monitor and improve their own effectiveness as a problem solver. For several reasons, teachers do such students a real favor by helping them encounter and face challenges when they are younger. Parents and teachers are usually more available to help students at an earlier age. Not so much is at stake yet in the way of grades and futures. And most important, learning to face challenges earlier gives these students more time to develop the planning, self-evaluation, and study skills they need to maximize their potential as learners.

If high-ability students and their parents panic at the onset of challenge, you can be a voice of calm and reason. Encourage parents to work with you in helping their children reach up for challenge rather than running from it.

Record-Keeping in a Differentiated Classroom

Developing classrooms in which students engage in varied content, sense-making activities, and product execution often requires teachers to modify their more traditional ways of keeping track of student growth. While teachers employ many useful strategies to chart student tasks and growth, it is important to recall that the dual purpose of all assessment is (1) to chart student growth in regard to valued skills and knowledge and (2) to use information gathered through that process to help in

planning the most appropriate learning experiences possible for given individuals and groups of students. Guidelines presented here may help you begin to develop a record-keeping system that works best for you, the nature of your classroom, and the age of your learners.

1. You don't have to throw out your grade book! Often, just relabeling the columns in a less-specific and more-generic way will be adequate. In a classroom where all students complete the *same* activity for a grade on a given day, the heading over the grade column might say *Ex. p. 211* to reflect that the grades below are on the fraction exercise found on page 211 of the text. In a class where students of varied readiness levels complete a variety of sense-making activities on fractions, your heading might read *Fract/4-9*, indicating that the grades below are on whatever assignment a student completed on April 9 related to fractions. A quick reference list of assignments, students working with them, and dates would enable you to look at the April 9 heading and reference which assignment Bobby, for example, worked on that day. Or you might elect to label a grade book column with the key concept or principle being explored by students. A grade in that column, then, would indicate to you that a particular student made a given grade on the activity appropriate for him or her related to that concept.

2. Student work folders are a valuable record-keeping device. Regardless of the age of your students, having them maintain a folder that keeps a running record of work completed, dates of completion, student or teacher comments about the work, and work samples is a powerful record-keeping aide. Color-coded folders for each period of the day can make distribution, collection, and storage of folders easy. Student work folders should contain record-keeping forms (e.g., student-choice reading lists, spelling lists, skills proficiencies demonstrated, product assignments, etc.), samples of student work, records of conferences with the teacher, student goals, and other data that would help both student and teacher maintain a sense of focus and direction. Use of these folders is also a powerful tool during planning conferences with students and parent-teacher conferences that focus on student growth. It won't take you long to discover that it's

necessary to allot a few minutes every few weeks for folder clean out.

3. Share as much record-keeping responsibility as possible with your students. Even very young learners can keep a calendar of daily or weekly activities, maintain records of reading, record their progress at a center or station by using forms left at those work places, and select work that they feel shows best what they have learned. Students can hand out and collect folders, prepare portfolios for parent conferences, write reports or use checklists to show their progress to parents and teachers, and assume responsibility for a myriad of other procedures that make record-keeping less demanding on you the teacher. Students who serve as an "expert of the day" can often check in work, monitor accuracy of completion of tasks, or make a record of which students have worked on a given task at a given time. Helping students become effective record-keepers also helps them develop clarity regarding goals, assignments and their progress; assists them in metacognition or thinking about what goes on around them in the classroom; and provides them with skills of organization that serve them well in many settings.

4. Consider the possibility that not all work has to be formally graded. An athlete may practice shooting 3-point baskets for many days. Formal "assessment" of his progress and skill comes days or weeks later in a game when he has a chance to apply what he has learned. A young musician goes to a violin lesson where the teacher explains and demonstrates what is required in order to grow in proficiency with the instrument. The youngster goes home to practice those skills for a week, returns for another cycle of advice and affirmation the next week, practices again, and undergoes formal assessment weeks or months later in a recital. No one feels the need to grade each basket-shooting session or each half hour of violin practice. Similarly, sense-making activities need not be formally graded each day. A well-constructed product assignment or test should provide adequate evidence of what the student knows and can do. A teacher who practices this principle may make daily jottings on a clip board (which she carries around during her interactions with students) or in a grade book to note who is or is not engaged in their work.

questions students ask, points of difficulty and clarity for varied students, and so forth, in lieu of formally correcting and grading all sense-making activities. This information can be used to develop upcoming assignments for students based on observed needs and strengths. Simultaneously, such a teacher facilitates intellectual risk-taking in students who do not have to fear making mistakes, but who learn that life typically offers opportunity to gain a skill before judging us on that skill. A student in this class can also complete assignments at an appropriate pace, because it is not necessary that all learners have the same number of grades in the grade book. What matters more is that all students have had an appropriate number of opportunities (ranging from zero to many) to make sense of and demonstrate their ability to apply concepts, principles, skills, and information related to a given area of study.

A Final Thought

FOURTEEN-YEAR-OLD KATHLEEN WROTE A POEM SEVERAL YEARS AGO. She was a high-ability learner who seldom found a serious reason to extend her academic reach in school. Then she encountered a teacher who caused her to find new power in herself. At the end of that school year, Kathleen wrote a poem to her teacher. On some level, it expresses the need of all students—and all humans—to push their own limits. It certainly describes Kathleen's acknowledgement of what it was like for her when that need was fulfilled. Her words also seem to express her clear sense of the role her teacher had played in that magical year, as the teacher saw Kathleen and dealt with her as an individual.

Push me! See how far I go!
Work me 'til I drop. Then pick me up.
Open a door, and then make me run to it before it closes.
Teach me so that I might learn,
Then let me enter the tunnel of experience alone.
And when, near the end,
I turn to see you beginning another's journey,
I shall smile.

Appendix
Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Compacting	A 3-step process that (1) assesses what a student knows about material to be studied and what the student still needs to master, (2) plans for learning what is not known and excuses student from what is known, and (3) plans for freed-up time to be spent in enriched or accelerated study.	• Recognizes large reservoir of knowledge in some learners • Satisfies hunger to learn more about more topics than school often allows • Encourages independence • Eliminates boredom and lethargy resulting from unnecessary drill and practice	• Explain the process and its benefits to students and parents • Preassess learner's knowledge and documents findings • Allow student much choice in use of time "bought" through previous mastery • Use written plans and timelines for accelerated or enrichment study • Can use group compacting for several students
Independent Projects	Process through which student and teacher identify problems or topics of interest to the student. Both student and teacher plan a method of investigating the problem or topic and identifying the type of product the student will develop. This product should address the problem and demonstrate the student's ability to apply skills and knowledge to the problem or topic.	• Builds on student interest • Satisfies curiosity • Teachers planning and research skills at advanced levels • Encourages independence • Allows work with complex and abstract ideas • Allows long-term and in-depth work on topics of interest • Taps into high motivation	• Build on student interest • Allow the student maximum freedom to plan, *based on student readiness for freedom* • Teacher provides guidance and structure to supplement student capacity to plan and to ensure high standards of production • Use preset timelines to zap procrastination • Use process logs to document the process involved throughout the study • Establish criteria for success

Appendix—*continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Interest Centers or Interest Groups	Interest centers (often used with younger learners) and interest groups (often used with older learners) can provide enrichment for students who demonstrate mastery/competence with required work and can be a vehicle for providing these students with meaningful study when required assignments are completed. In addition, all learners enjoy and need the opportunity to work with interest centers/groups in order to pursue areas of special interest to them. These centers/groups can be differentiated by level of complexity and independence required, as well as by student interest to make them accessible and appropriately challenging for all learners.	• Allows student choice • Taps into student interest—motivating • Satisfies curiosity—explores hows and whys • Allows study of topics not in the regular curriculum • Can allow for study in greater breadth and depth • Can be modified for student readiness • Can encourage students to make connections between fields of study or between study and life	• Build on student interest • Encourage students to help you develop interest-based tasks • Adjust for student readiness • Allow students of like interests to work together • Develop clear (differentiated) criteria for success • For advanced learners, allow long blocks of time for work, change centers less often to allow for depth of study, make certain tasks are challenging
Tiered Assignments	In a heterogeneous classroom, a teacher uses varied levels of activities to ensure that students explore ideas at a level that builds on their prior knowledge and prompts continued growth. Student groups use varied approaches to exploration of essential ideas.	• Blends assessment and instruction • Allows students to begin learning where they are • Allows students to work with appropriately challenging tasks • Allows for reinforcement or extension of concepts and principles based on student readiness • Allows modification of working conditions based on learning style • Avoids work that is anxiety-producing (too hard) or boredom-producing (too easy) • Promotes success and is therefore motivating	• Be sure the task is focused on a key concept or generalization essential to the study • Use a variety of resource materials at differing levels of complexity and associated with different learning modes • Adjust the task by complexity, abstractness, number of steps, concreteness, and independence to ensure appropriate challenge • Be certain there are clear criteria for quality and success

(Continued on next page)

Appendix—*continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Flexible Grouping	Students are part of many different groups—and also work alone—based on the match of the task to student readiness, interest, or learning style. Teachers may create skills-based or interest-based groups that are heterogeneous or homogeneous in readiness level. Sometimes students select work groups, and sometimes teachers select them. Sometimes student group assignments are purposeful and sometimes random.	• Allows both for quick mastery of information/ideas and need for additional exploration by students needing more time for mastery • Allows both collaborative and independent work • Gives students and teachers a voice in work arrangements • Allows students to work with a wide variety of peers • Encourages teachers to "try out" students in a variety of work settings • Keeps students from being "pegged" as advanced or struggling • Keeps students from being cast as those in need of help and those who are helpers	• Ensure that all students have opportunities to work both with students most like themselves in readiness and/or interest, and with students dissimilar from themselves in readiness and/or interest • Teacher assigns work groups when task is designed to match individual readiness/interest based on preassessment or teacher knowledge • Teacher assigns work groups when desirable to ensure that students work with a variety of classmates • Students select groups when task is well-suited for peer selection • Alternate purposeful assignment to groups with teacher/student selection • Ensure that all students learn to work cooperatively, collaboratively, and independently • Be sure there are clear guidelines for group functioning that are taught in advance of groupwork and consistently reinforced

Appendix—*continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Learning Centers	Learning centers can be "stations" or collections of materials learners use to explore topics or practice skills. Teachers can adjust learning center tasks to readiness levels or learning styles of different students.	• Allows matching task with learner's skills level • Encourages continuous development of student skills • Allows matching task with student learning style • Enables students to work at appropriate pace • Allows teacher to break class into practice and direct instruction groups at a given time • Helps develop student independence	• Match task to learner readiness, interest, learning style • Avoid having all learners do all work at all centers • Teach students to record their own progress at centers • Monitor what students do and what they understand at centers • Have clear directions and clear criteria for success at centers
Varying Questions	In class discussions and on tests, teachers vary the sorts of questions posed to learners based on their readiness, interests, and learning styles	• All students need to be accountable for information and thinking at high levels • Some students will be challenged by a more basic thought question • Others will be challenged by a question that requires speed of response, large leaps of insight, or making remote connections • Teachers can "try out" students with varied sorts of questions as one means of assessing student progress and readiness • Varying questions appropriately helps nurture motivation through success • In oral settings, all students can hear and learn from a wide range of responses	• Target some questions to particular students and "open the floor" to others • Use open-ended questions where possible • Use wait time before taking answers • When appropriate, give students a chance to talk with thinking partners before giving answers • Encourage students to build on one another's answers • Require students to explain and defend their answers • Adjust the complexity, abstractness, degree of mental leap required, time constraints, connections required between topics, etc., based on learning profile of the student being asked a question

(Continued on next page)

Appendix—*continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Mentorships/ Apprenticeships	Students work with a resource teacher, media specialist, parent volunteer, older student, or community member who can guide their growth in a particular area. Some mentorships may focus on design and execution of advanced projects, some on exploration of particular work settings, some on affective development, and some on combinations of goals.	• Mentorships extend learning beyond the classroom • Mentorships make learning a partnership • Mentorships can help students expand awareness of future options and how to attain them • Mentorships allow teachers to tap into student interest, strengths, and needs • Mentorships have a low teacher-to-learner ratio (often one-to-one)	• Match the mentor with the student's needs (interests, strengths, culture, gender) • Be clear in your own mind and specific about the goals of the collaboration • Make sure roles of mentor, student, teacher, and parent are written and agreed upon • Provide appropriate preparation and instruction for mentors, including key information about the student • Monitor the progress of the mentorship regularly and help problem solve if snags occur • Connect what is learned in the mentorship to what goes on in class whenever feasible

Appendix—*continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Contracts	Contracts take a number of forms that begin with an agreement between student and teacher. The teacher grants certain freedoms and choices about how a student will complete tasks, and the student agrees to use the freedoms appropriately in designing and completing work according to specifications.	• Can blend skill- and content-based learning matched to student's need • Eliminates unnecessary skill practice for students • Allows students to work at appropriate pace • Helps students learn planning and decision-making skills important for independence as learners • Allows teachers time to work with individuals and small groups • Can encourage extended study on topics of interest • Can foster research, critical and creative thinking, application of skills, and integrated learning	• Blend both skill- and content-based learning in the contract • Match skills to readiness of the learner • Match content to readiness, interests, and learning style of student • Allow student choice, especially in content-based portions of the contract • Establish clear and challenging standards for success from the outset • Provide rules for the contract in writing • When possible, focus the contract on concepts, themes, or problems, and integrate appropriate skills into required projects or products • Vary levels of student independence and time span of the contract to match student readiness

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Selected ASCD Resources Related to Differentiating Instruction in Mixed-Ability Classrooms

ASCD Select Resource Packets

Resource packets of articles, abstracts, and other documents on various topics, drawn from *Educational Leadership*, *ASCD Update* and *Curriculum Update*, the *Curriculum Technology Quarterly*, and the *Journal of Curriculum and Supervision*, as well as other sources available in the public domain. Each packet includes two disks (DOS only): the *ASCD Resources Diskette* (with brief descriptions of all ASCD products and services) and *Educational Leadership Abstracts* from September 1989 through May 1994. Each packet also includes a discount coupon for a savings of 10% on any one ASCD product. Call ASCD at (703) 549-9110, ext. 518 or 507, for information about other topics. Price for each packet: $34.95.

The following Resource Packets are particularly relevant to this book:

Assessment: Portfolio Assessment. Stock # Select 02
Gifted Education. Stock # Select 22
Thinking Skills. Stock # Select 19

ASCD Books

Cooperative Learning in the Classroom
by David W. Johnson, Roger T. Johnson, and Edythe J. Holubec. 1994. 110 pages. Stock # 1-94224. $13.95.

A Different Kind of Classroom: Teaching with Dimensions of Learning
by Robert Marzano. 1992. 191 pp. Stock # 611-92107. $15.95. Part of ASCD and Midcontinent Regional Educational Laboratory's Dimension of Learning program. *Trainer's Manual*, *Teacher's Manual*, and accompanying video also available. Call ASCD Order Processing.

How to Untrack Your School
by Paul George. 1992. 42 pp. Stock # 611-92135. $6.95.

In Search of Understanding: The Case for Constructivist Classrooms
by Jacqueline Grennon Brooks and Martin G. Brooks. 1993. 136 pp. Stock # 611-93148. $13.95.

Multiple Intelligences in the Classroom
by Thomas Armstrong. 1994. 186 pp. Stock # 1-94055. $14.95.

ASCD Video-Based Staff Development Programs

Challenging the Gifted in the Regular Classroom
Featured Educators: Joseph Renzulli and Carolyn Callahan. Video program with *Facilitator's Guide*. Stock # 4-94057. Purchase: $378 (ASCD member price). Rentals and previews also available for all video programs.

Cooperative Learning
Program consultants: Robert Slavin, Roger Johnson, David Johnson, and Britt Vasquez. 5-tape set and *Facilitator's Manual*. Stock # 614-201. Purchase of entire set: $980 (ASCD members).

Inclusion
Including special education students in the general education environment, in cooperation with the Council for Exceptional Children. 3-tape set and *Facilitator's Guide*. Stock # 4-95044. Purchase of entire set: $680 (ASCD members).

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Making Meaning: Integrated Language Arts Series
Collaborator: International Reading Association. Program consultants: Rosemary McDonald, Ann McCallum, Irene Blum, Dorothy Burrus. 5-tape series, with *Facilitator's Guide*. Stock # 614-228. Purchase: $965 (ASCD members).

What's New in School—A Parent's Guide
Four tapes, with presentation guides and parent handouts, on cooperative learning, curriculum integration, and performance assessment. Stock # 4-94178. Purchase of entire set: $135 (ASCD members).

Educational Leadership Theme Issues

The Inclusive School. Vol. 52, No. 4, December 1994/January 1995. Stock # 1-94214. $5.00.

Self-Renewing Schools. Vol. 52, No. 7, April 1995. Stock # 1-95021. $5.00.

Strategies for Success. Vol. 52, No. 3, November 1994. Stock # 1-94213. $5.00.

Teaching for Understanding. Vol. 51, No. 5, February 1994. Stock # 1-94025. $5.00.

ASCD Audiotapes

A Redefinition of Current Age-Grade Educational Paradigms for Gifted Students. 1994 Annual Conference Audiotape. Presenters: P. Johnson, L. Tomaselli, B. Morrison. Stock # 2-94087. $9.95.

Guiding Performance-Based Teaching and Learning. A set of three audiotapes: (1) "Major Beliefs Guiding Performance-Based Education," (2) "Fundamental Principles of Performance-Based Tasks and Rubrics," and (3) "Structural Changes Needed to Support Performance-Based Teaching and Learning," by H.H. Jacobs, R. Marzano, D. Pickering, and G. Wiggins. Stock # 2-95039. $29.00.

Teaching Thinking to Multiple Intelligences and Diverse Student Populations. Presenter: R. Strong. Stock # 2-94022. $9.95.

ASCD Networks

Authentic Assessment
Facilitators: *Kathleen Bussick*, Pacific Region Education Lab, 828 Fort Street Mall, Mall 500, Honolulu, HI 96813. Phone: (808) 533-6000 ext. 131. FAX: (808) 533-7599; *Judith Dorsch Backes*, Carroll County Public Schools, 55 North Court Street, Westminster, MD 21157. Phone: (410) 848-8280. FAX: (410) 876-9224.

Developing Giftedness and Talent
Facilitator: *Brian Reid*, Assistant Professor, University of Alabama at Birmingham, 901 S. 13th Street, 127-A Education Building, Birmingham, AL 35294-1250. Phone: (205) 934-3440. FAX (205) 934-2921.

Teaching for Multiple Intelligences
Facilitator: *David G. Lazear*, New Dimensions of Learning, 729 West Waveland, Suite G, Chicago, IL 60613. Phone: (312) 525-6650.

For information on these and other networks, contact the ASCD Networks Program, Field Services Department, ext. 503 or 504.

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About ASCD

Founded in 1943, the Association for Supervision and Curriculum Development is a nonpartisan, nonprofit education association, with international headquarters in Alexandria, Virginia. ASCD's mission statement: *ASCD, a diverse, international community of educators, forging covenants in teaching and learning for the success of all learners.*

Membership in ASCD includes a subscription to the award-winning journal *Educational Leadership*; two newsletters, *Education Update* and *Curriculum Update*; and other products and services. ASCD sponsors affiliate organizations in many states and international locations; participates in collaborations and networks; holds conferences, institutes, and training programs; produces publications in a variety of media; sponsors recognition and awards programs; and provides research information on education issues.

ASCD provides many services to educators—prekindergarten through grade 12—as well as others in the education community, including parents, school board members, administrators, and university professors and students. For further information about ASCD, call (703) 549-9110 or fax (703) 549-3891. Internet access: gopher.ascd.org. Or write to ASCD, Information Services, 1250 N. Pitt St., Alexandria, VA 22314.

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How to Differentiate Instruction in Mixed-Ability Classrooms

Just as students come in different sizes and shapes and with differing cultural backgrounds, interests, and abilities, so do teachers face challenges in "fitting" instruction to the students in their classrooms. This book provides practical guidance in addressing the diverse needs of students in mixed-ability classrooms. Differentiated instruction is not "individualized" instruction; neither does it have to be chaotic. It provides multiple approaches to content, process, and product; and it is a blend of whole-class, group, and individual instruction.

The author, Carol Ann Tomlinson, states: "My goal here is to help teachers determine what differentiated instruction is, why it is appropriate for all learners, how to plan for it, how to manage it, how to help parents and students prepare for differentiated classrooms, and how to assess student progress." She describes actual classrooms that use strategies for managing differentiated classrooms and provides detailed how-to's for lesson planning. An appendix lists strategies, including pretesting for competence ("compacting"), independent projects, interest centers, and tiered assignments.

Carol Ann Tomlinson is Assistant Professor of Educational Studies, Curry School of Education, Department of Educational Studies, University of Virginia, Charlottesville.

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ISBN 0-87120-245-X